HCD-GN880

SERVICE MANUAL

E Model
Australian Model

Ver 1.0 2004. 04

- HCD-GN880 is the Amplifier, CD player, tape deck and tuner section in MHC-GN880.

CD Section	Model Name Using Similar Mechanism	HCD-GX450
	CD Mechanism Type	CDM74-F1BD81
	Base Unit Name	BU-F1BD81A
	Optical Pick-up Name	KSM-215DCP/C2NP
TAPE Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	CWM43RR35

SPECIFICATIONS

Amplifier section

The following are measured at
Mexican model: AC 127 V, 60 Hz
Other models: AC 120, 220, 240 V, 50/60 Hz
DIN power output (rated) 180 + 180 watts
(6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
225 + 225 watts
(6 ohms at 1 kHz, 10% THD)
Inputs
VIDEO/MD (AUDIO) IN (phono jacks):
voltage 250/450 mV, impedance 47 kiloohms
GAME (VIDEO) IN (phono jack):
1 Vp-p, 75 ohms
GAME (AUDIO) IN (phono jack):
voltage 250 mV, impedance 47 kiloohms
MIC (phone jack): sensitivity 1 mV, impedance 10 kiloohms

Outputs
VIDEO OUT (phono jack): max. output level
1 Vp-p, unbalanced, Sync negative, load impedance 75 ohms
PHONES (stereo mini jack): accepts headphones of 8 ohms or more

FRONT SPEAKER: Use only the supplied speaker SS-GN880
SURROUND SPEAKER: Use only the supplied speaker SS-RS880
SUBWOOFER OUT: Use only the supplied subwoofer SS-WG880

Disc player section

System: Compact disc and digital audio system
Laser: Semiconductor laser (λ=780 nm)
Emission duration: continuous
Laser Output: Max. 44.6 µW*
*This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Wave length: 780 – 790 nm
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
OPTICAL CD DIGITAL OUT
Wave length: 660 nm
Output Level: –18 dBm

– Continued on next page –

MiNi Hi-Fi COMPONENT SYSTEM

9-877-802-01
2004D02-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

Tape deck section

Recording system	4-track 2-channel stereo
Frequency response	50 – 13,000 Hz (±3 dB), using Sony TYPE I tape

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
Middle Eastern models:	531– 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
Australian model:	230 – 240 V AC, 50/60 Hz
Mexican model:	127 V AC, 60 Hz
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	350 watts
Dimensions (w/h/d) (Approx.)	280 x 360 x 394.5 mm
Mass (Approx.)	14.4 kg
Supplied accessories:	Remote Commander (1) Batteries (2) AM loop antenna (1) FM lead antenna (1) Front speaker pads (8) Surround speaker pads (8) Subwoofer pads (4)

Design and specifications are subject to change without notice.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. This label is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

1. SERVICING NOTES 4

2. GENERAL
Location of Controls 5

3. DISASSEMBLY
3-1. Disassembly Flow 7
3-2. Case 8
3-3. Loading Panel Assy 8
3-4. Front Panel Assy 9
3-5. CD Mechanism Deck (CDM74-F1BD81) 9
3-6. Tape Mechanism Deck, Game Board 10
3-7. CD Switch Board, Panel Board 10
3-8. Switch Board 11
3-9. Tuner Pack 11
3-10. Primary Board 12
3-11. Rear Panel 12
3-12. Main Board 13
3-13. Surround Board, PA Board 13
3-14. Power Transformer 14
3-15. Driver Board, SW Board 14
3-16. BD Board, Optical Pick-Up (KSM-215DCP/C2NP) 15
3-17. Sensor Board 15
3-18. Motor (TB) Board 16
3-19. Motor (LD) Board 16

4. TEST MODE 17

5. MECHANICAL ADJUSTMENTS 21

6. ELECTRICAL ADJUSTMENTS
Deck section 21
CD Section 22

7. DIAGRAMS
7-1. Circuit Board Location 26
7-2. Block Diagram – CD Section – 28
7-3. Block Diagram – Tuner/Tape Deck Section – 29
7-4. Block Diagram – Main Section – 30
7-5. Block Diagram – Display/Power Section – 31
7-6. Printed Wiring Board – BD Board – 32
7-7. Schematic Diagram – BD Board – 33
7-8. Printed Wiring Board – CD Mechanism Board – 34
7-9. Schematic Diagram – CD Mechanism Board – 35
7-10. Printed Wiring Boards – Main Board – 36
7-11. Schematic Diagram – Main Board (1/3) – 37
7-12. Schematic Diagram – Main Board (2/3) – 38
7-13. Schematic Diagram – Main Board (3/3) – 39
7-14. Printed Wiring Boards
– Game, CD Switch Board – 40
7-15. Schematic Diagram
– Game, CD Switch Board – 41
7-16. Printed Wiring Board – PA Board – 42
7-17. Schematic Diagram – PA Board – 43
7-18. Printed Wiring Board – Surround Board – 44
7-19. Schematic Diagram – Surround Board – 45
7-20. Schematic Diagram –Panel Board (1/2) – 46
7-21. Schematic Diagram –Panel Board (2/2) – 47
7-22. Printed Wiring Board – Panel Board – 48
7-23. Printed Wiring Boards – Primary Board – 49
7-24. Schematic Diagram – Primary Board – 50
7-25. IC Block Diagram 50
7-26. IC Pin Function Description 52

8. EXPLODED VIEWS
8-1. Case, Rear Panel Section 58
8-2. Front Panel Section 59
8-3. Chassis Section 60
8-4. CD Mechanism Deck Section-1
(CDM74-F1BD81) 61
8-5. CD Mechanism Deck Section-2
(CDM74-F1BD81) 62

9. ELECTRICAL PARTS LIST 63

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

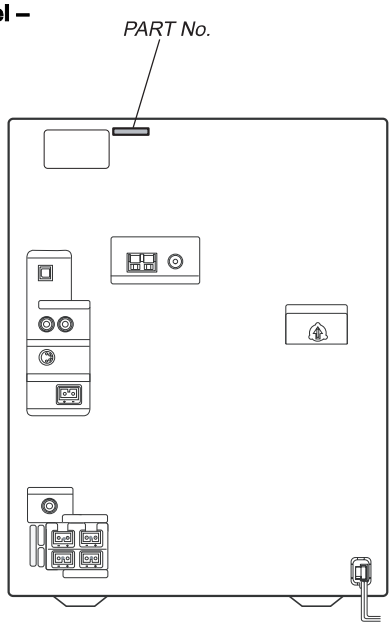
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output several times.

• MODEL IDENTIFICATION
– Back Panel –



MODEL	PART No.
E2, E3models	4-252-723-0[]
AUS model	4-252-723-1[]
E51 model	4-252-723-2[]
Mexican model	4-252-723-3[]

• Abbreviation
E2 : 120 V AC Area in E model
E3 : 240 V AC Area in E model
E51 : Chilean and Peruvian model
AUS : Australian model

List of button locations and reference pages

Main unit

ALPHABETICAL ORDER

A – D

ALBUM 16
AMP MENU 38
CD 36
CD SYNC 14
Deck A 27
Deck B 20
DIRECTION 11
DISC 1 ~ 3 3
Disc tray 42
DISPLAY 40
Display 5

E – L

EFFECT ON/OFF 37
ENTER 21
EQ EDIT 8
EX-CHANGE/DISC SKIP 4
FM MODE 10
GAME 30
GAME INPUT (jacks) 26
GAME MIXING 34
GROOVE 29
ILLUMINATION 28

M – R

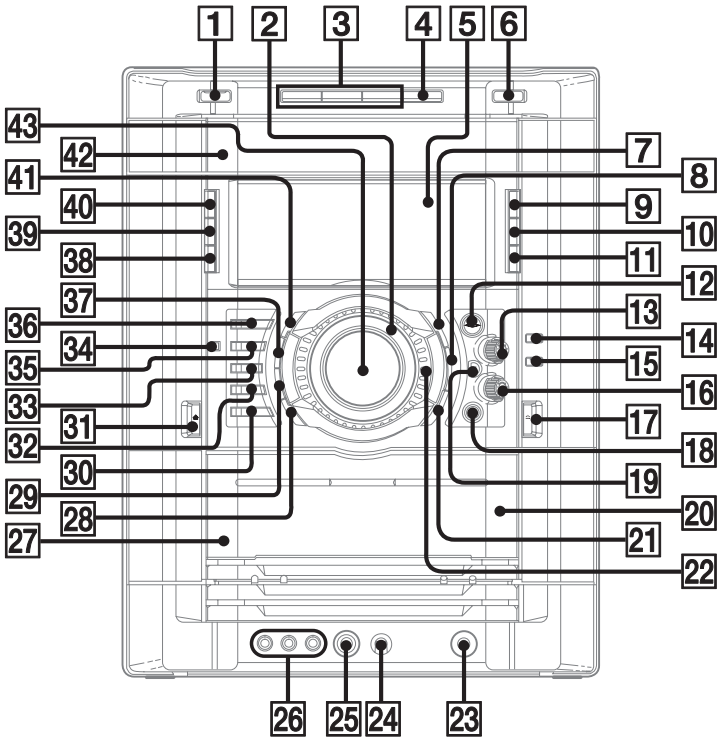
MIC (jack) 25
MIC LEVEL 24
MULTI JOG 22
P FILE MEMORY 7
PHONES (jack) 23
PLAY MODE 9
Power illuminator 2
REC PAUSE/START 15
REPEAT 10

S – Z

SLEEP 39
SURR SPEAKER MODE 41
TAPE A/B 33
TUNER/BAND 35
TUNER MEMORY 11
TUNING MODE 9
VIDEO/MD 32
VOLUME 43

SYMBOLS

I/⏻ (power) 1
⏏ OPEN/CLOSE 6
◄ ► (play) 12
⏮ ⏭ (go backward/forward) 13
◄◄ ►► (rewind/fast forward) 16
⏸ (pause) 19
■ (stop) 18
⏏ A (Eject A) 31
⏏ B (Eject B) 17



This section is extracted from instruction manual.

Remote c ontrol

ALPHABETICAL ORDER

A – E

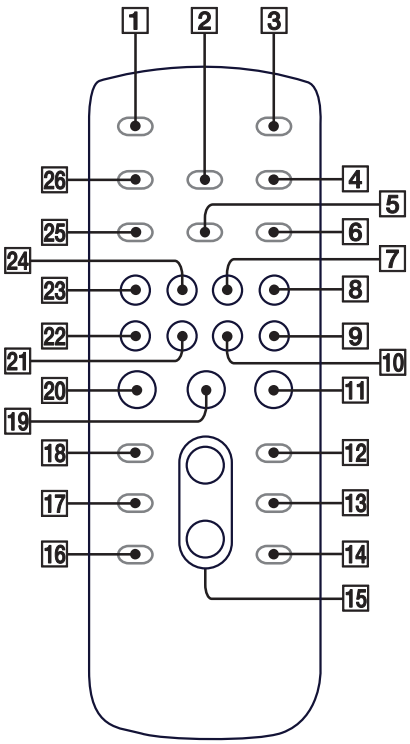
ALBUM + 14
ALBUM – 16
CD 24
CLEAR 18
CLOCK/TIMER SELECT 2
CLOCK/TIMER SET 4
DISC SKIP 13
DISPLAY 26
ENTER 12
EQ 17

F – Z

FM MODE 6
FUNCTION 8
PLAY MODE 5
REPEAT 6
SLEEP 1
TAPE 23
TUNER/BAND 7
TUNER MEMORY 25
TUNING MODE 5
VOLUME +/– 15

SYMBOLS

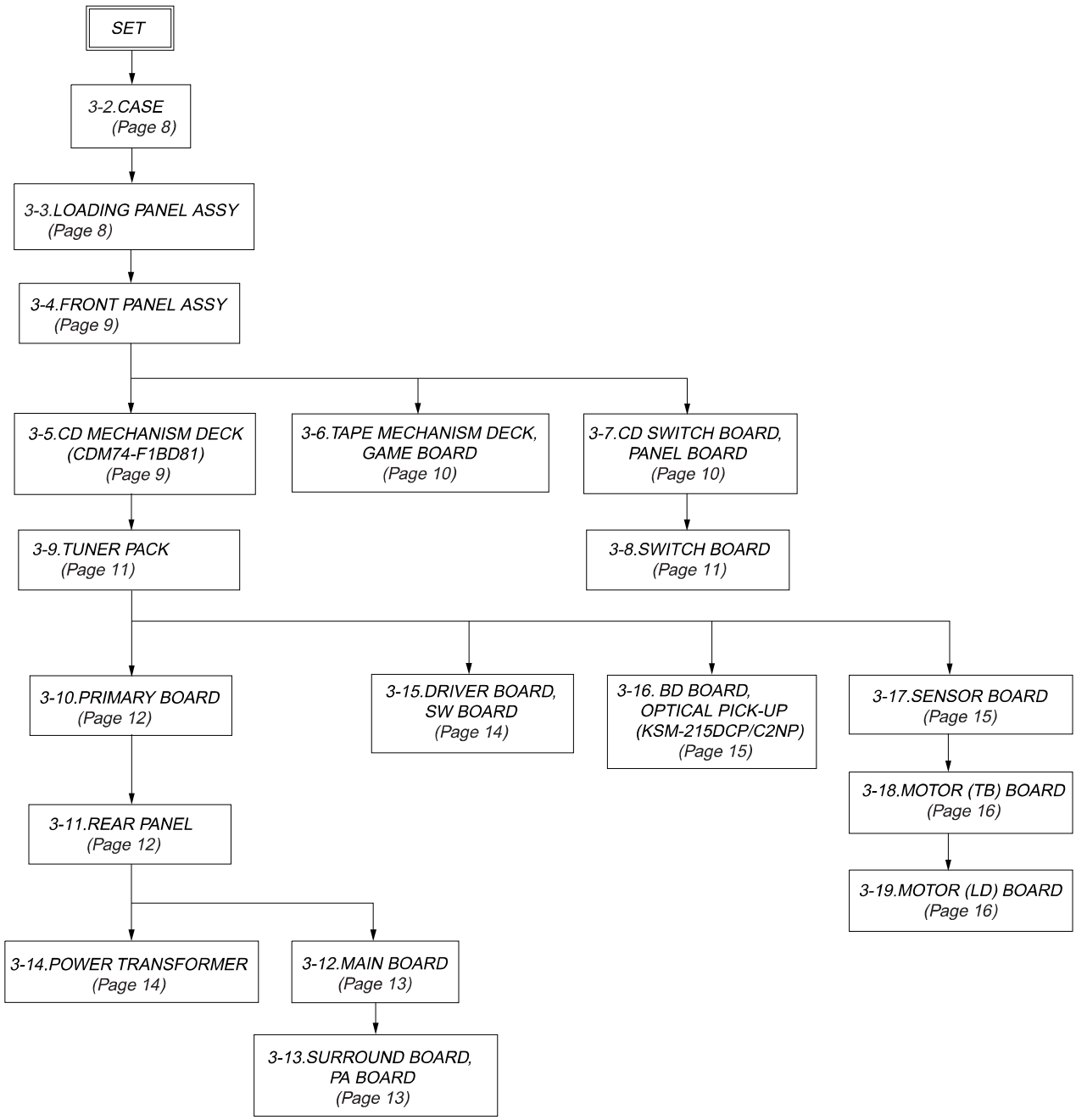
I/⏻ (power) 3
■ (stop) 11
❚❚ (pause) 19
► (play) 20
⏮ (go backward) 22
⏭ (go forward) 21
◄◄ (rewind) 10
►► (fast forward) 9



SECTION 3
DISASSEMBLY

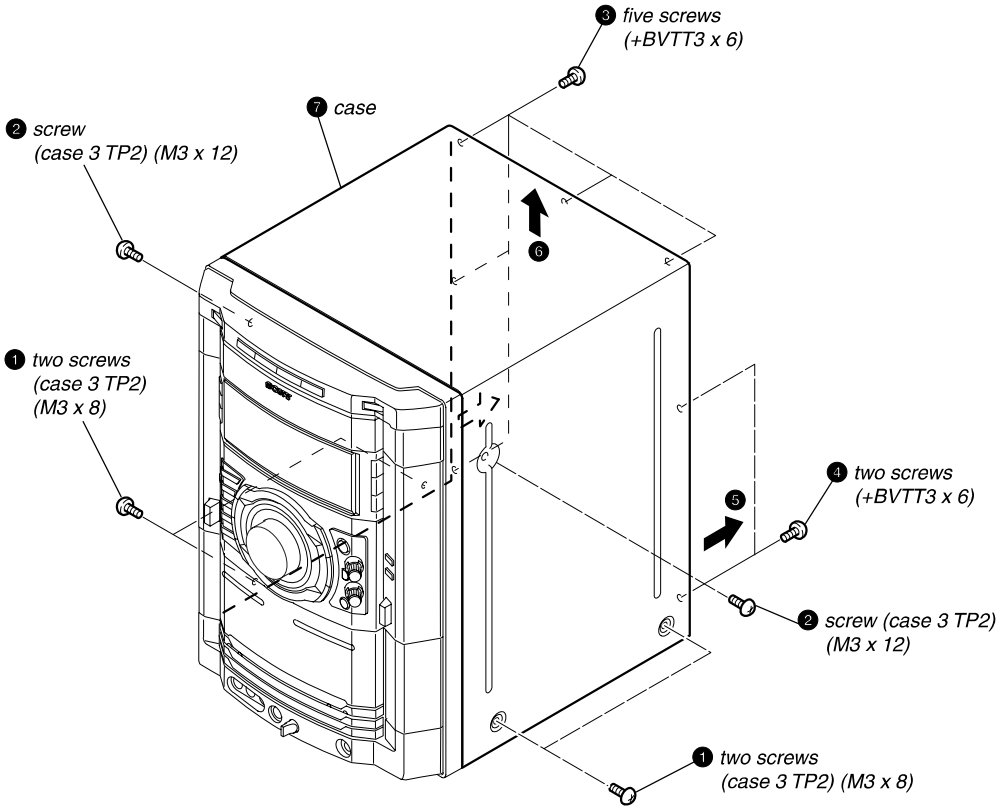
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

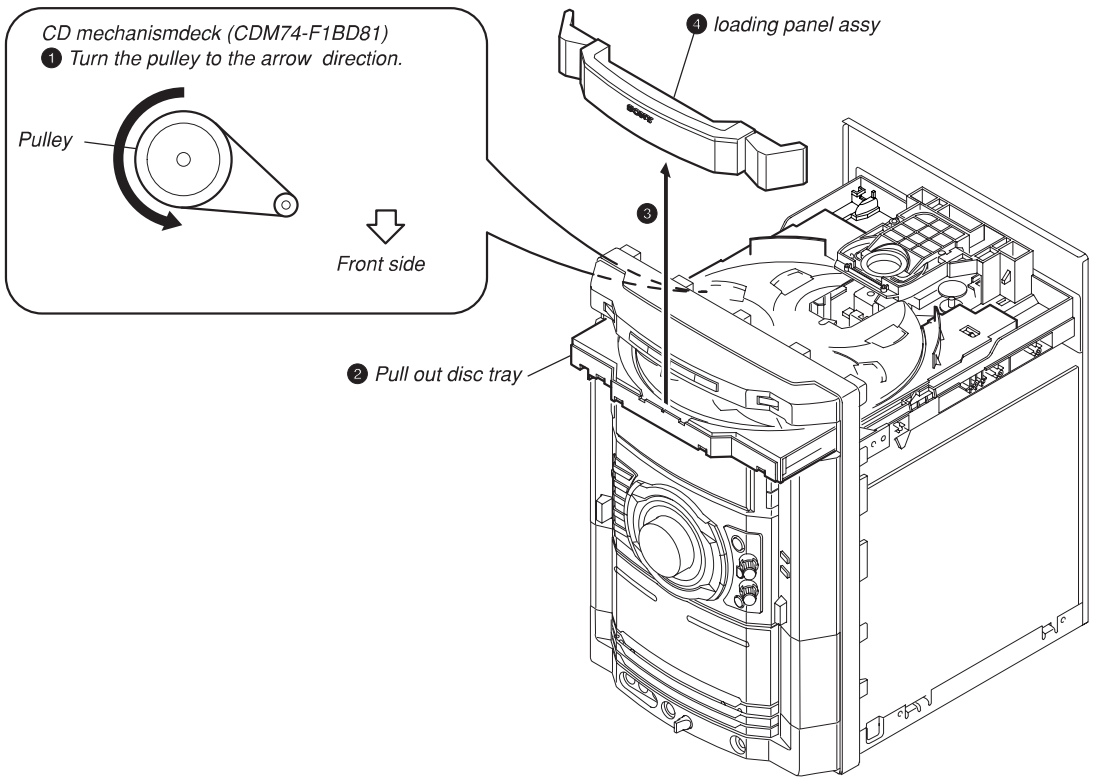

SET
3-2.CASE (Page 8)
3-3.LOADING PANEL ASSY (Page 8)
3-4.FRONT PANEL ASSY (Page 9)
3-5.CD MECHANISM DECK (CDM74-F1BD81) (Page 9)
3-6.TAPE MECHANISM DECK, GAME BOARD (Page 10)
3-7.CD SWITCH BOARD, PANEL BOARD (Page 10)
3-8.SWITCH BOARD (Page 11)
3-9.TUNER PACK (Page 11)
3-10.PRIMARY BOARD (Page 12)
3-11.REAR PANEL (Page 12)
3-12.MAIN BOARD (Page 13)
3-13.SURROUND BOARD, PA BOARD (Page 13)
3-14.POWER TRANSFORMER (Page 14)
3-15.DRIVER BOARD, SW BOARD (Page 14)
3-16. BD BOARD, OPTICAL PICK-UP (KSM-215DCP/C2NP) (Page 15)
3-17.SENSOR BOARD (Page 15)
3-18.MOTOR (TB) BOARD (Page 16)
3-19.MOTOR (LD) BOARD (Page 16)

Note: Follow the disassembly procedure in the numerical order given.

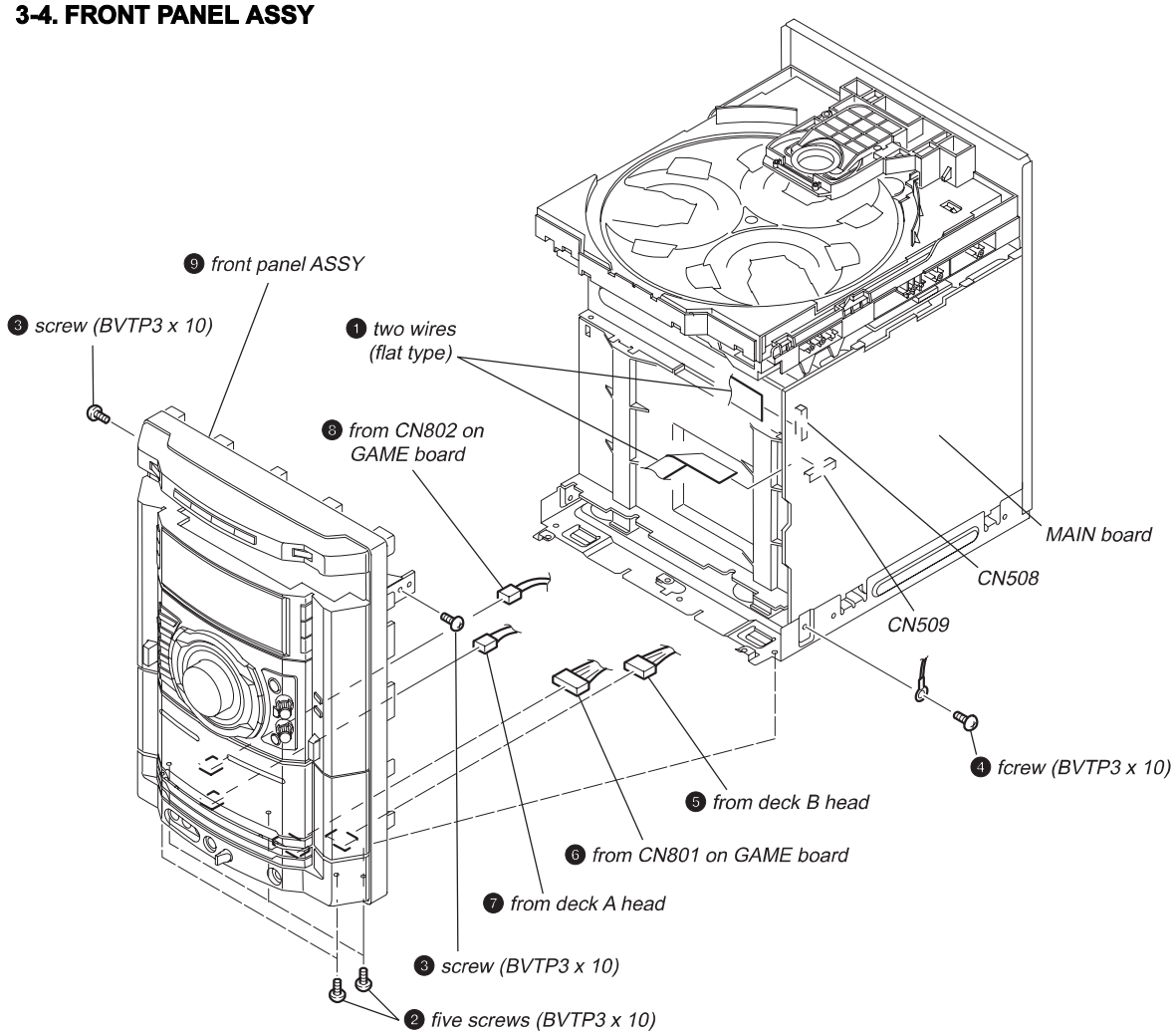
3-2. CASE



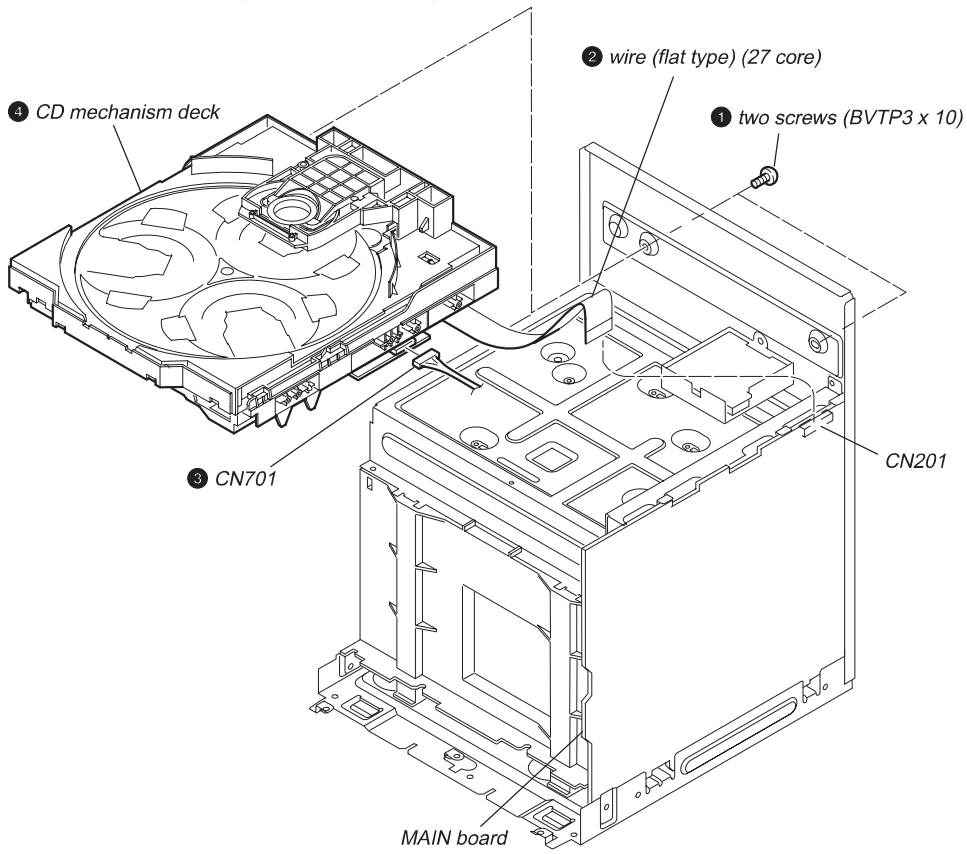
3-3. LOADING PANEL ASSY



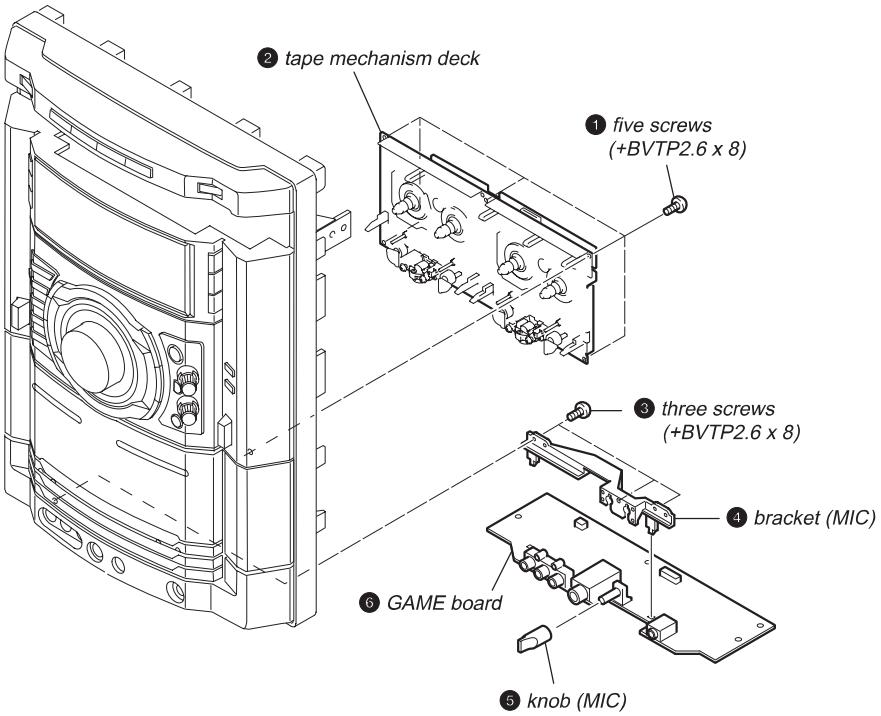
3-4. FRONT PANEL ASSY


9 front panel ASSY
3 screw (BVTP3 x 10)
1 two wires (flat type)
8 from CN802 on GAME board
MAIN board
CN508
CN509
4 fcrew (BVTP3 x 10)
5 from deck B head
6 from CN801 on GAME board
7 from deck A head
3 screw (BVTP3 x 10)
2 five screws (BVTP3 x 10)

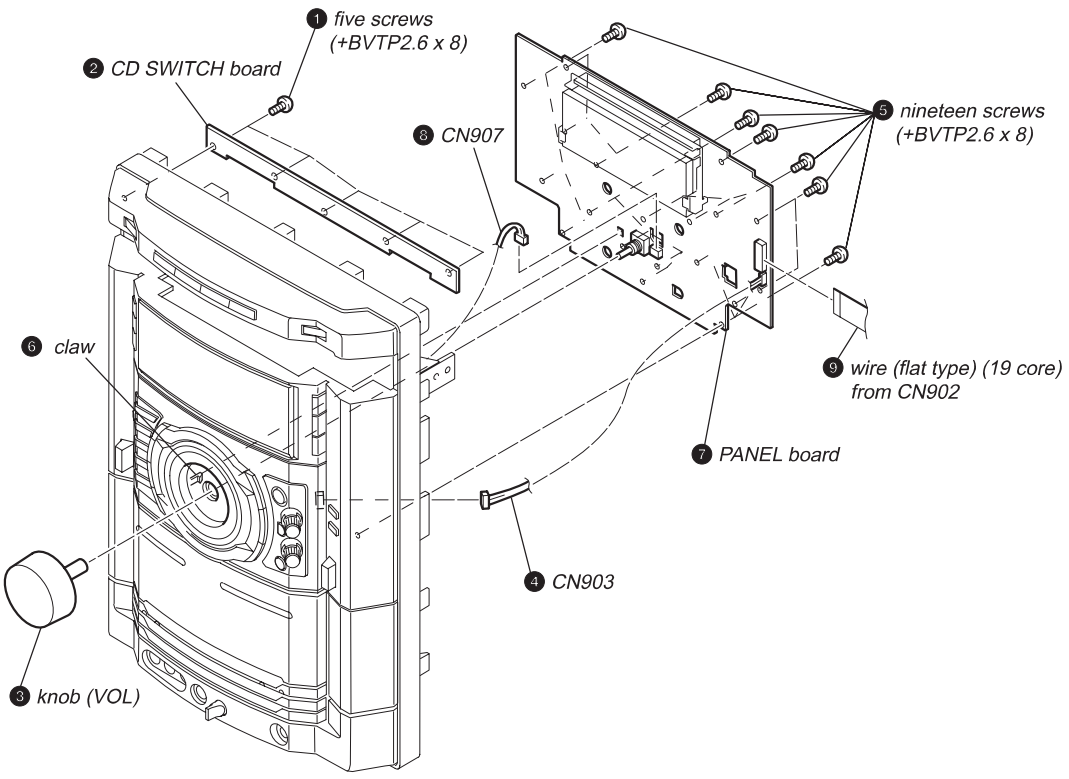
3-5. CD MECHANISM DECK (CDM74-F1BD81)



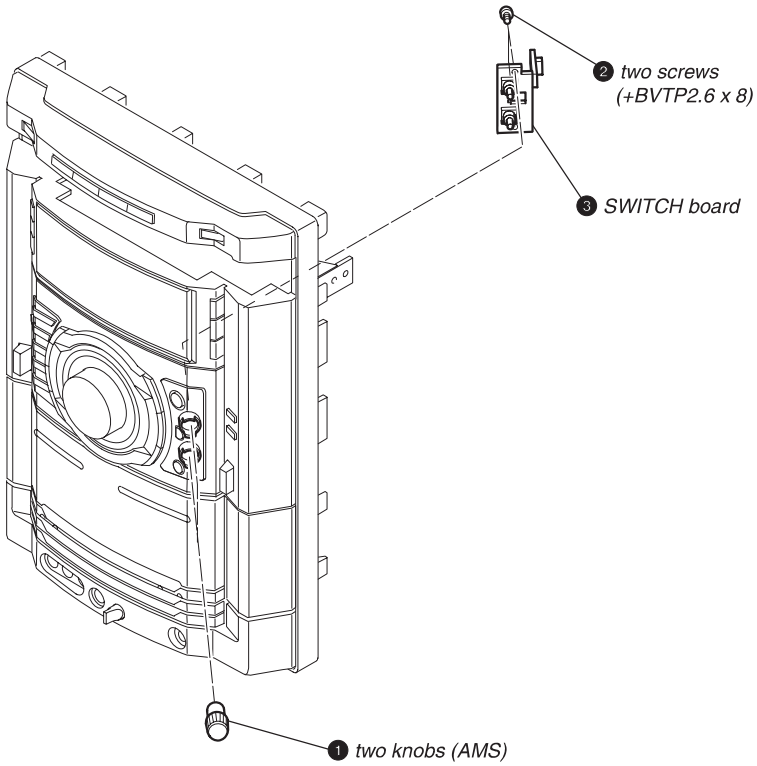
3-6. TAPE MECHANISM DECK, GAME BOARD



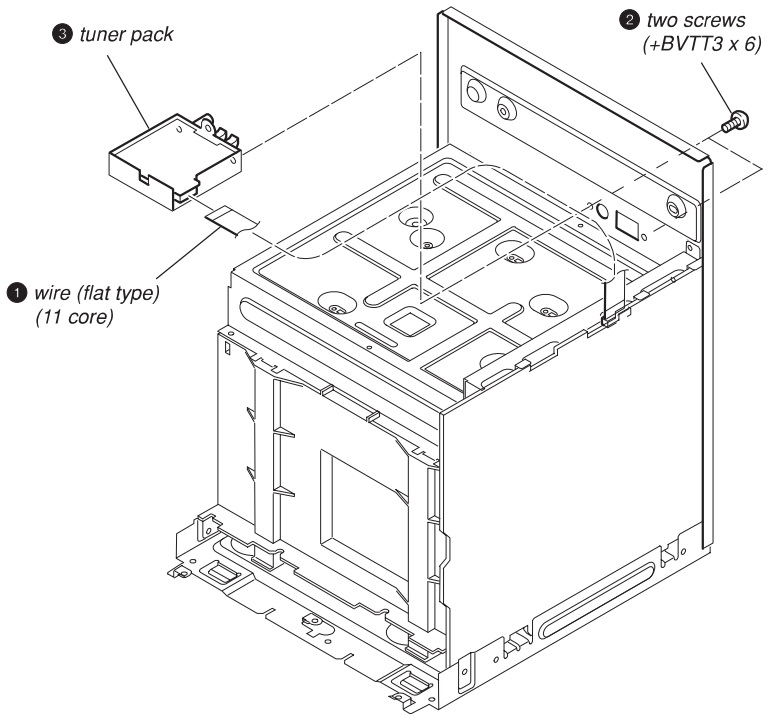
3-7. CD SWITCH BOARD, PANEL BOARD



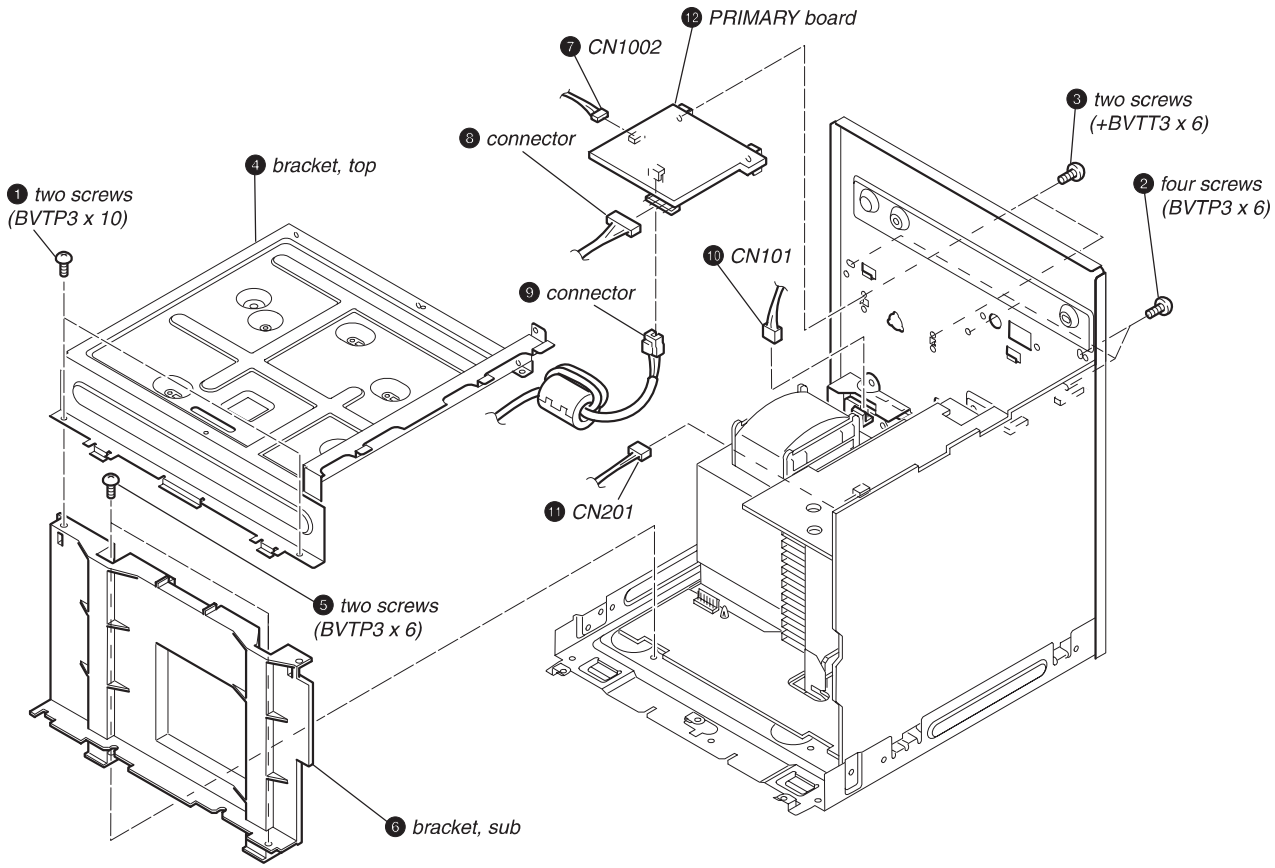
3-8. SWITCH BOARD



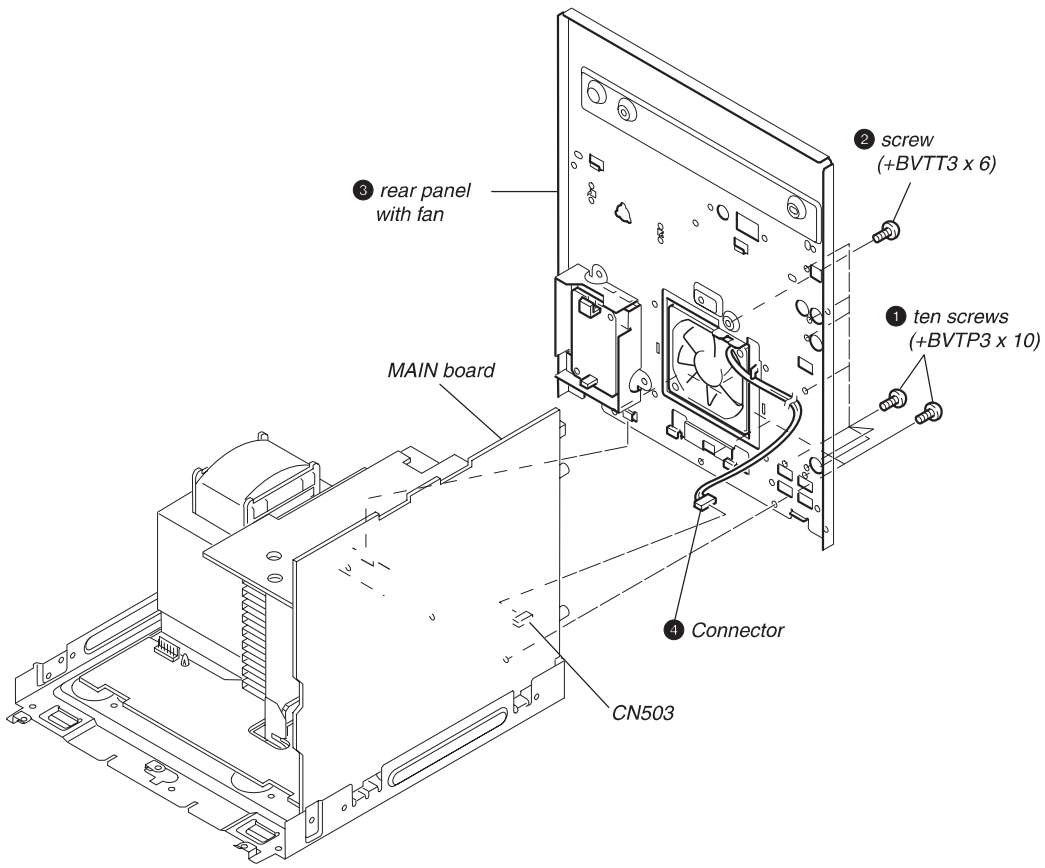
3-9. TUNER PACK



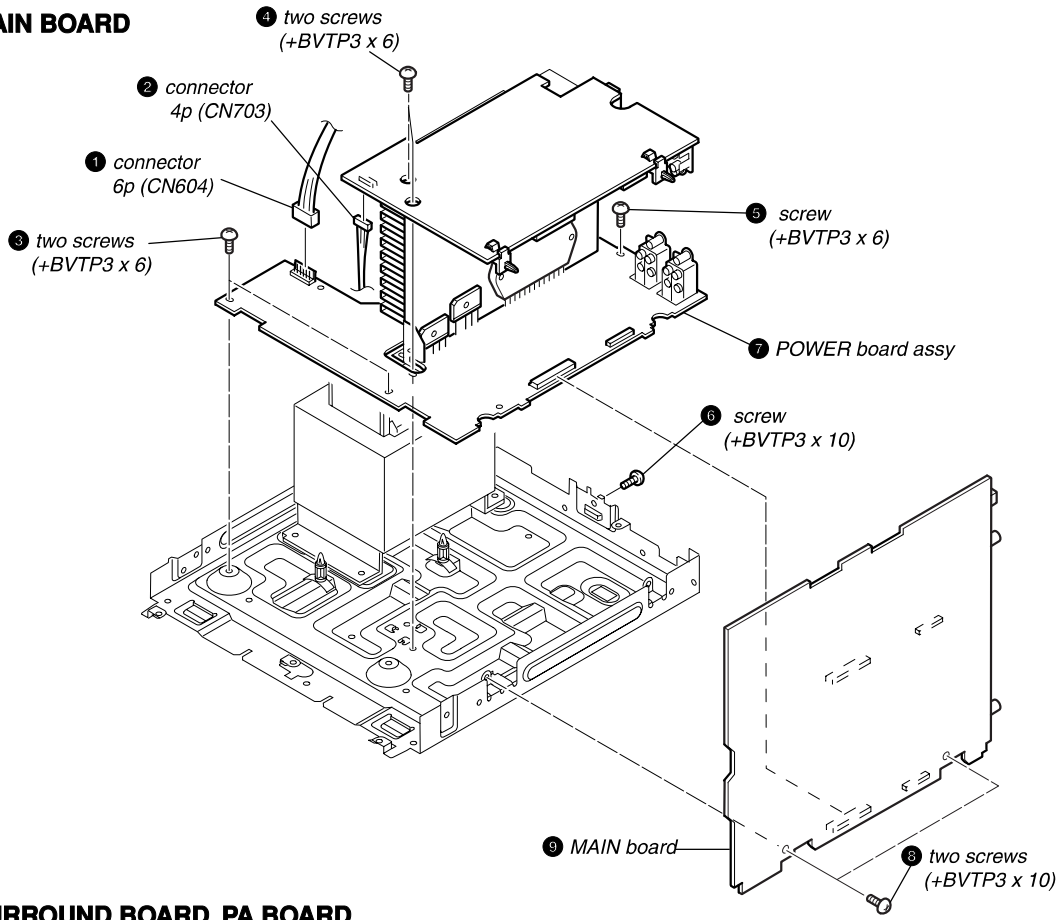
3-10. PRIMARY BOARD



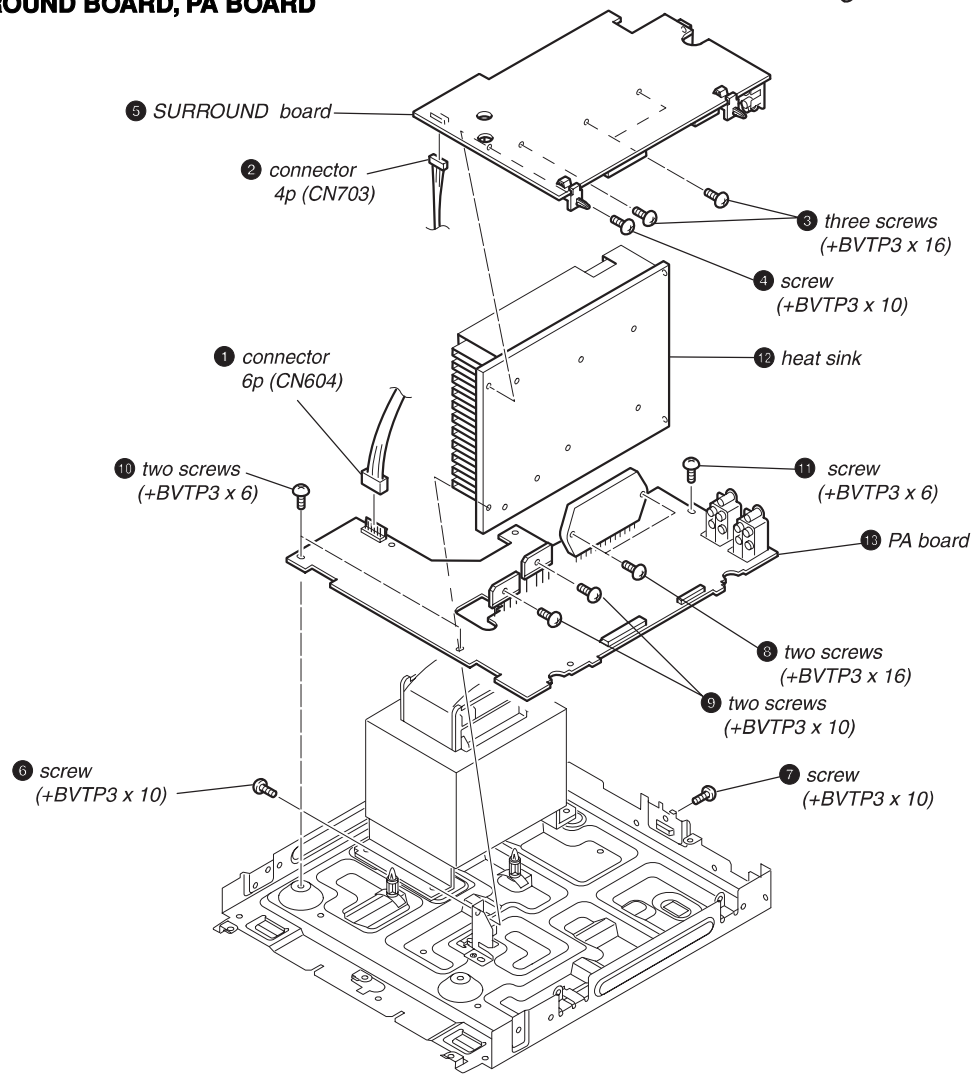
3-11. REAR PANEL



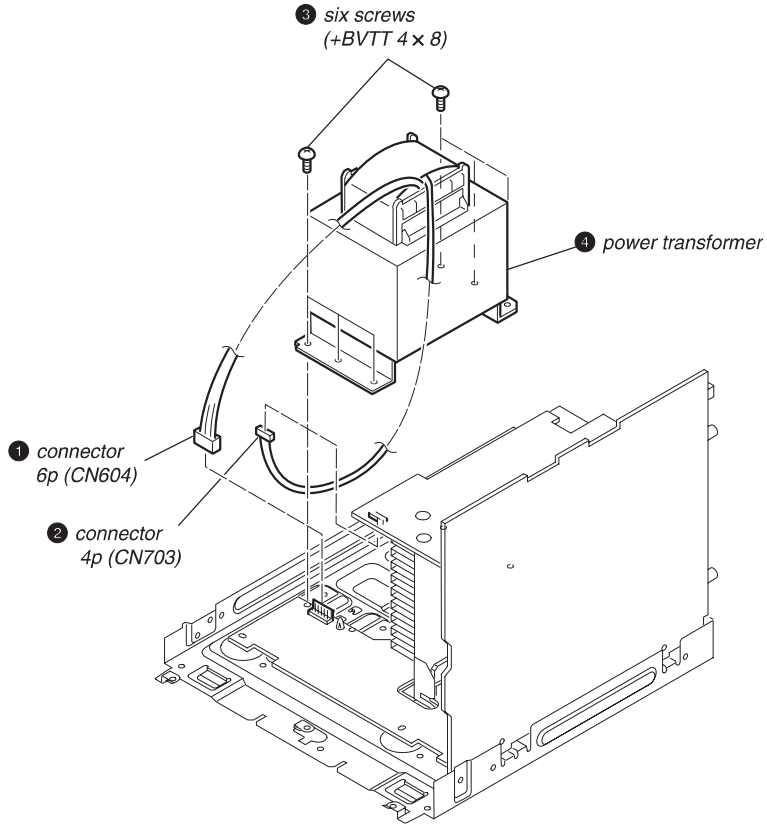
3-12. MAIN BOARD


4 two screws (+BVTP3 x 6)
2 connector 4p (CN703)
1 connector 6p (CN604)
3 two screws (+BVTP3 x 6)
5 screw (+BVTP3 x 6)
7 POWER board assy
6 screw (+BVTP3 x 10)
9 MAIN board
8 two screws (+BVTP3 x 10)

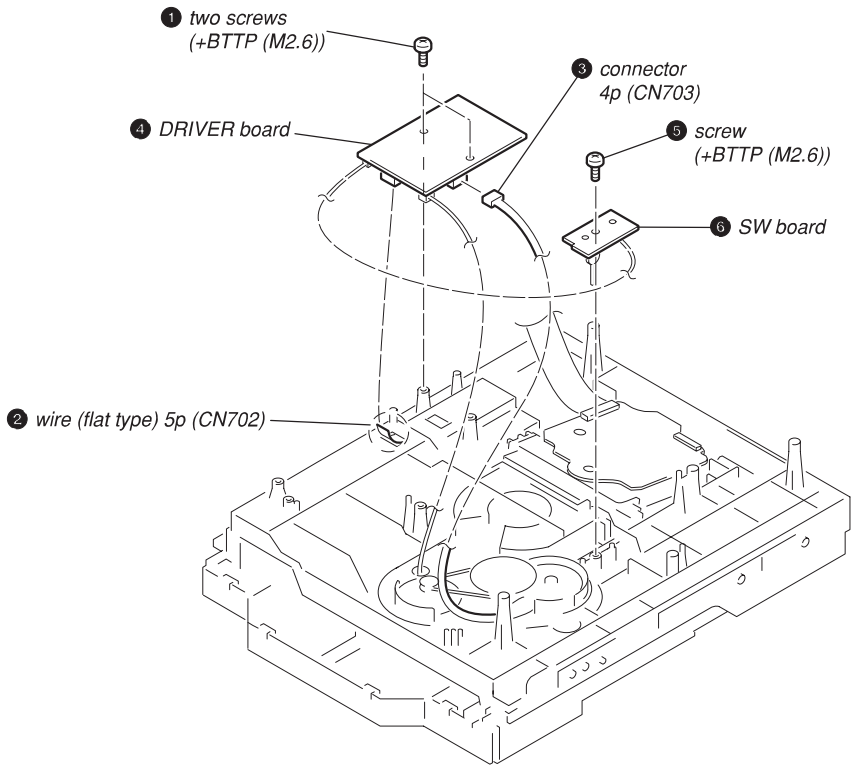
3-13. SURROUND BOARD, PA BOARD


5 SURROUND board
2 connector 4p (CN703)
3 three screws (+BVTP3 x 16)
4 screw (+BVTP3 x 10)
1 connector 6p (CN604)
12 heat sink
10 two screws (+BVTP3 x 6)
11 screw (+BVTP3 x 6)
13 PA board
8 two screws (+BVTP3 x 16)
9 two screws (+BVTP3 x 10)
6 screw (+BVTP3 x 10)
7 screw (+BVTP3 x 10)

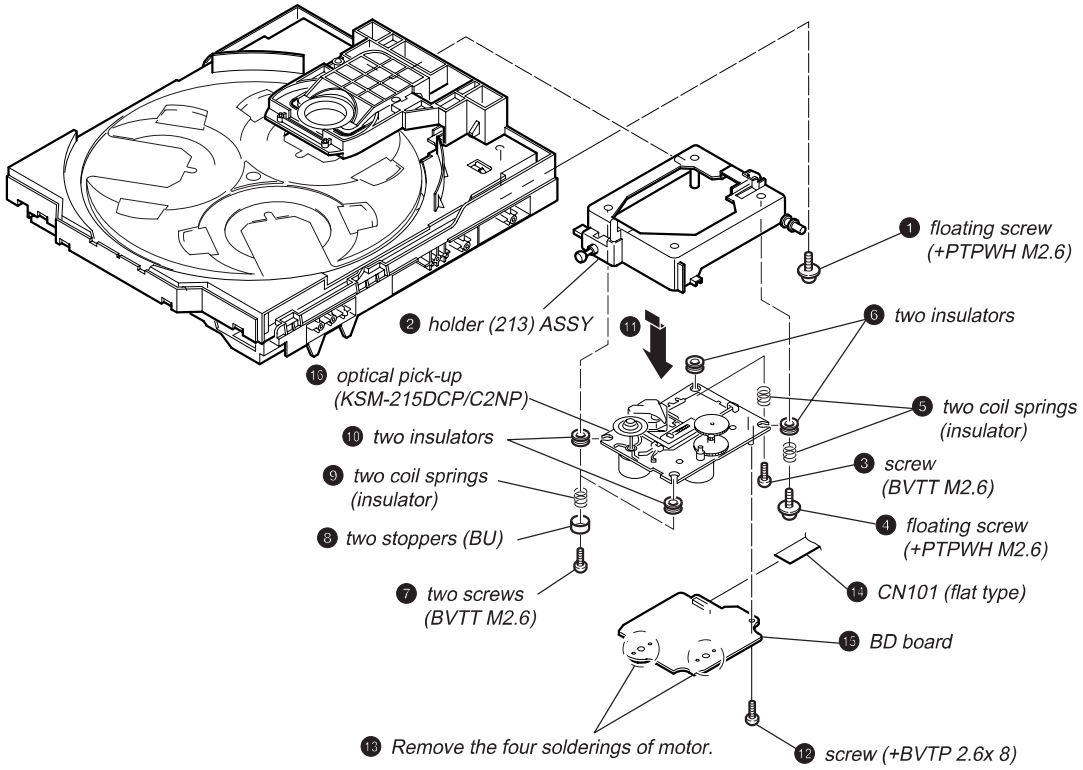
3-14. POWER TRANSFORMER



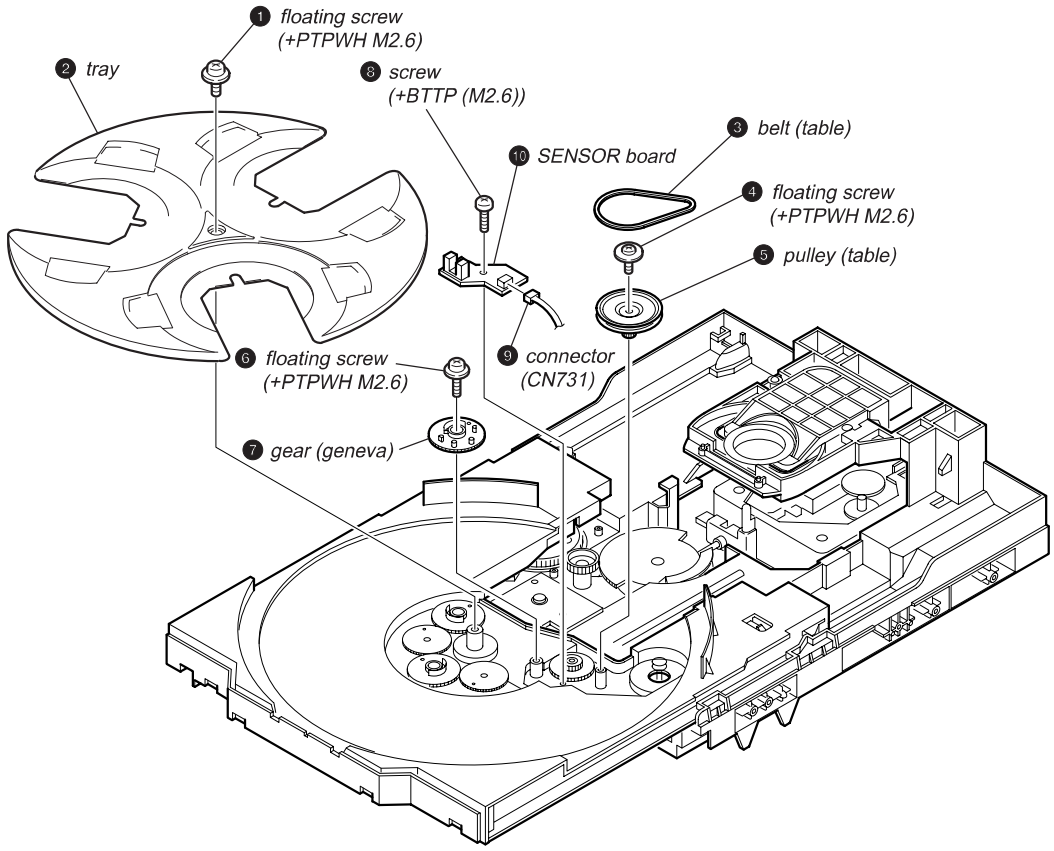
3-15. DRIVER BOARD, SW BOARD



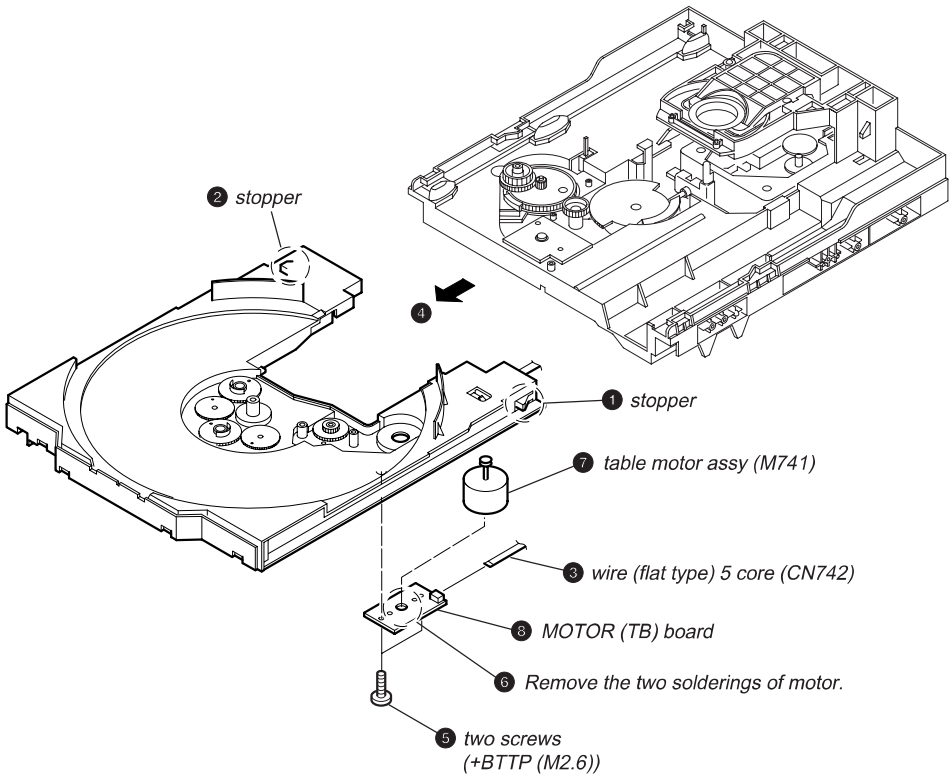
3-16. BD BAORD, OPTICAL PICK-UP (KSM-215DCP/C2NP)


1 floating screw (+PTPWH M2.6)
2 holder (213) ASSY
11
6 two insulators
13 optical pick-up (KSM-215DCP/C2NP)
5 two coil springs (insulator)
10 two insulators
3 screw (BVTT M2.6)
9 two coil springs (insulator)
4 floating screw (+PTPWH M2.6)
8 two stoppers (BU)
14 CN101 (flat type)
7 two screws (BVTT M2.6)
15 BD board
13 Remove the four solderings of motor.
12 screw (+BVTP 2.6x 8)

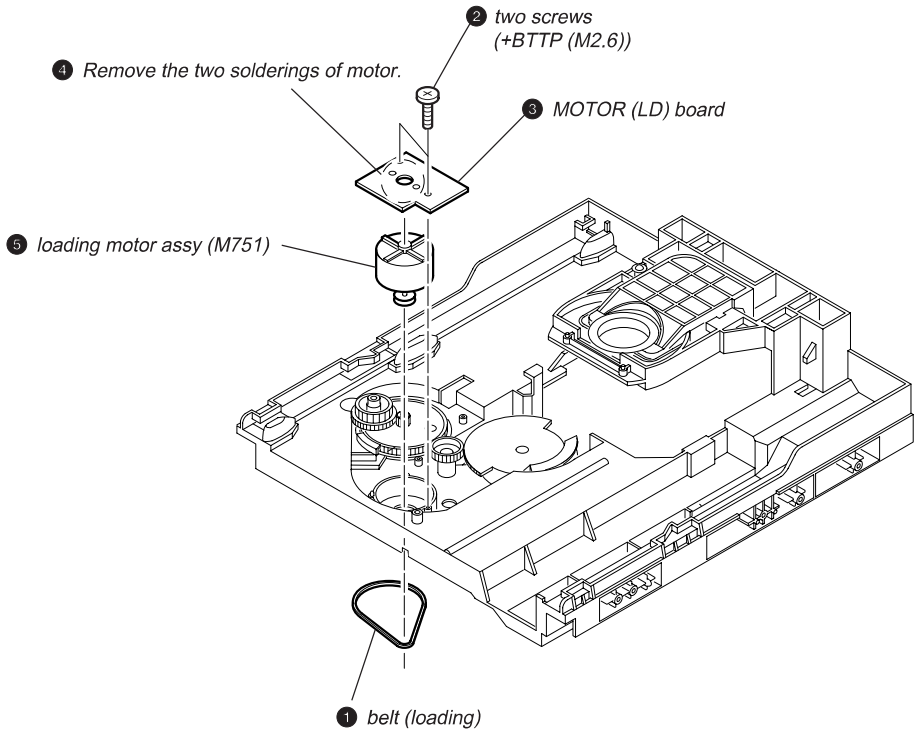
3-17. SENSOR BOARD



3-18. MOTOR (TB) BOARD



3-19. MOTOR (LD) BOARD



SECTION 4
TEST MODE

[GC TEST MODE]

- This mode is used to check the fluorescent indicator tube, LED, model, destination, software version, volume, key jog, encoder and VACS level.

Procedure:

1. Press ■ button, [ENTER] button and [DISC 2] button simultaneously.
2. All LEDs and segments in fluorescent indicator tube are lighted up.
3. When you want to enter the software version display mode, press [DISC 1] button. The model and destination are displayed.
4. Each time [DISC 1] button is pressed, the display changes from MC version, GC version, CD version, CDDM version, CDMA version, CDMB version, BDA version, BDB version, ST version, TA version, TM version and TC version in this order, and returns to the MC version display.
5. When [DISC 3] button is pressed while the version numbers are being displayed except model and destination, the date of the software creation appear. When [DISC 3] button is pressed again, the display returns to the software version display. When [DISC 1] button is pressed while the date of the software creation is being displayed, the date of the software creation is displayed in the same order of software version display.
6. Press [DISC 2] button, the key check mode is activated.
7. In the key check mode, the fluorescent indicator tube displays "K 0 J 0 V 0 E 0".
   Each time a button is pressed, "K" value increases. However, once a button has been pressed, it is no longer taken into account.
   "J" value increases in the manner of 0,1, 2, 3 ... if [MULTI JOG] knob is turned clockwise, or it decreases in the manner of 0, 9, 8, 7 ... if [MULTI JOG] knob is turned counter-clockwise.
   "V" value increases in the manner of 0,1, 2, 3 ... if [VOLUME] knob is turned clockwise, or it decreases in the manner of 0, 9, 8, 7 ... if [VOLUME] knob is turned counter-clockwise.
   "E" value increases in the manner of 0,1, 2, 3 ... if [⏮ ⏭] knob is turned clockwise, or it decreases in the manner of 0, 9, 8, 7 ... if [⏮ ⏭] knob is turned counter-clockwise.
8. When [DISC 3] button is pressed after all LEDs and segments in fluorescent indicator tube light up, the fluorescent indicator tube displays "VACS A+B APCC". A is VACS level which is trigger by signal level, B is VACS level which is trigger by temperature and CC is VACS level which is trigger by APVACS (Abuse Protection VACS).
9. When [EX-CHANGE/DISC SKIP] button is pressed after all LEDs and segments in fluorescent indicator tube light up, alternate segments in fluorescent indicator tube would light up. If you press [EX-CHANGE/DISC SKIP] button again, another half of alternate segments in fluorescent indicator tube would light up. Pressing [EX-CHANGE/DISC SKIP] button again would case all segments lights up.
10. To release this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[MC TEST MODE]

- This mode is used to check operations of the respective sections of Amplifier, Tuner, and Tape.

Procedure:

* To enter MC Test Mode

1. Press ■ button, [ENTER] button and [DISC 3] button simultaneously.
2. The CD ring indicators TAPE A and TAPE B indicators flash on the fluorescent indicator tube. The function is changed to VIDEO.

* Check of Amplifier

1. Press [EQ EDIT] button repeatedly until a message "GEQ MAX" appears on the fluorescent indicator tube. GEQ increases to its maximum.
2. Press [EQ EDIT] button repeatedly until a message "GEQ MIN" appears on the fluorescent indicator tube. GEQ increases to its minimum.
3. Press [EQ EDIT] button repeatedly until a message "GEQ FLAT" appears on the fluorescent indicator tube. GEQ set to flat.
4. When the [VOLUME] knob is turned clockwise even slightly, the sound volume increases to its maximum and a message "VOLUME MAX" appears.
5. When the [VOLUME] knob is turned counter-clockwise even slightly, the sound volume decreases to its minimum and a message "VOLUME MIN" appears.

* Tape function

1. When a tape is inserted in Deck B and recording is started, the function is changed to VIDEO automatically. When [CD SYNC] button is pressed during recording in function, ALC (Automatic Logic Control) is turned on.
2. During recording, turn [◀◀ ▶▶] knob to counter clockwise rotation will change the function to TAPE B and rewind Tape B until the recording start position and playback of Tape B is started. If the [REC PAUSE/ START] button is pressed for a pause and pressed again to resume recording during recording time, when tape deck B is rewind, tape deck B will be rewind until the position where the pause is applied.

* AMS Test Mode

1. Select the function "TAPE A" or "TAPE B".
2. Select Loop or Relay direction mode by pressing the [DIRECTION TUNER MEMORY] button. Insert a test tape AMS-110A or AMS-120 to selected tape deck.
3. Press the [AMP MENU] button to enter the AMS test mode.
4. After the test tape is rewind to the beginning of the tape, the AMS+ is checked, and the mechanism is shut off after detecting the AMS signal twice.
5. Then the AMS- is checked and the mechanism is shut off after detecting the AMS signal twice.
6. When the check is complete, a message of either OK or NG appears.

* To release MC Test mode.

1. To release this mode, press [I/⏻] button.
2. The cold reset is enforced at the same time.

[COLD RESET]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press ■ button, [ENTER] button, and [I/⏻] button simultaneously.
2. The fluorescent indicator tube becomes blank for a while, and the set is reset.

[VACS ON/OFF]

- This mode is used to switch ON and OFF the VACS (Variable Attenuation Control System).

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [ENTER] button and [GAME MIXING] button simultaneously. The message "VACS OFF" or "VACS ON" appears.

[TUNER STEP CHANGE]

- The step interval of AM channels can be toggled between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [TUNER/BAND] button to select the "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [ENTER] button and [I/⏻] button simultaneously. The system will turn ON automatically. The message "AM 9k STEP" or AM 10k STEP" appears and thus the channel step is changed.

[CD SERVICE MODE]

- This mode let you move the CD sled motor freely. Use this mode when you want to clean the optical pick-up.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select CD function.
3. Press [■], [ENTER] button, and [⏏ OPEN/CLOSE] button simultaneously.
4. The CD service mode is activated. The message "SERVICE MODE" appears.
5. With the CD in stop status, turn [◀◀ ▶▶] knob to clockwise rotation to move the optical pick-up to outside track, or turn [◀◀ ▶▶] knob to counterclockwise rotation to move to inside track. The message "SLED OUT" or "SLED IN" appears.
6. To turn on or off the laser, press [PLAY MODE] button. The message "LASER ON" or "LASER OFF" appears on the fluorescent indicator tube.
7. To release this mode, press [I/⏻] button.

[AGING MODE]

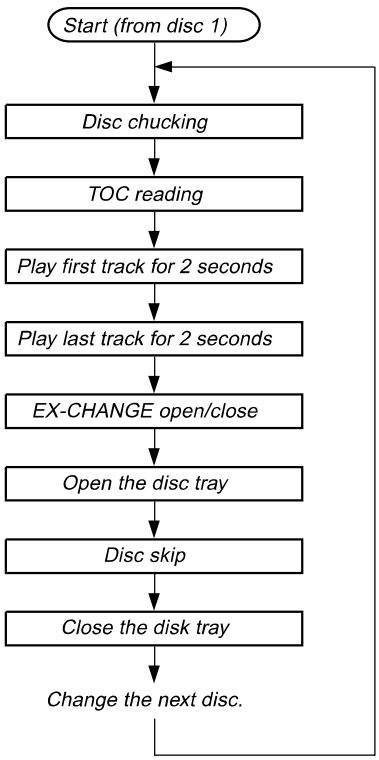
This mode can be used for operation check of CD section.

- If an error occurs, the aging operation would stops and the status is displayed.
- If there are no error occurs, the aging operation would continues repeatedly.

Procedure:

1. Press [I/⏻] button to turn the set ON
2. Select CD function.
3. Load three discs on the disc tray.
4. Press [PLAY MODE] button to select the "ALL DISCS" mode, and press the [REPEAT] button to select "REPEAT OFF" mode.
5. Press [■] button, [ENTER] button, and [EX-CHANGE/DISC SKIP] button simultaneously.
6. Aging operation is started.
7. To release this mode, press [I/⏻] button or disconnect the power cord to turn the power OFF.

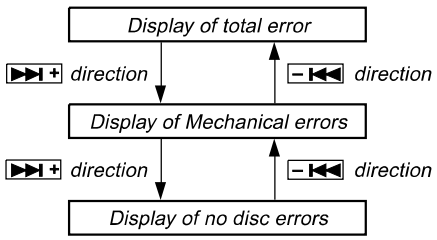
Aging mode sequence:



• Display when an error occurred (CD Error Code Mode)

Procedure:

1. Press ■ button, ENTER button and DISC 1 button simultaneously to enter the error code display mode.
2. The fluorescent indicator tube displays the number of total error.
3. Each time ◀◀ ▶▶ knob is rotated, display change as below.



4. To clear the error record, operate the cold reset. (Refer to the "MC COLD RESET")
5. To release this mode, press the I/⏻ button or disconnect the power plug to turn the power OFF.

1) Display of total error

Display

EM**ED**

EM**: The number of mechanical errors.
ED**: The number of no disc errors after chucking the disc.

2) Display of mechanical errors

Display

M*$$:&&##00

M*: The number of mechanical error ("00" is latest one)
(Rotate |◀◀ ▶▶| knob in the direction of either to display next error)
$$: Not used
%%: Loading related error (Second figure is not used)
- D: Stop by the problem other than mechanical problem while closing.
- E: Stop by the problem other than mechanical problem while opening.
- C: Stop by the problem other than mechanical problem while chucking up.
- F: Stop by the problem other than mechanical problem while chucking down.

&&: Emerging error
- 01: Stop while chucking up.
- 02: Stop while chucking up.
- 03: Time-out of EX-CHANGE open.
- 05: Time-out of EX-CHANGE close.

##: Not used

3) Display of no disc errors

Display

D*$$:&&##00

D*: The number of mechanical error ("00" is latest one)
(Rotate |◀◀ ▶▶| knob in the direction of either to display next error)
$$: Error type
- 01: Focus error
- 02: GFS error
- 03: Setup error

%%: Not used
&&:
- 00: No disc judgment without chucking retry.
- 01: No disc judgment after chucking retry.

##: The state when judged as no disc
- 01: Stop
- 02: Setup
- 03: TOC reading
- 04: Access
- 05: Playback
- 06: Pause
- 07: Manual search (Play)
- 08: Manual search (Pause)

[CD REPEAT 5 LIMIT OFF MODE]

- The number of repeat for CD playback is 5 times when the repeat mode is "REPEAT ALL". This mode enables CD to repeat playback for limitless times.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select CD function.
3. Press ■ button, EQ EDIT button and CD button simultaneously to enter the CD repeat 5 limit off mode and the fluorescent indicator tube displays "LIMIT OFF".
4. To release this mode, operate the cold reset. (Refer to the "MC COLD RESET")

[CD SHIP MODE (WITH MEMORY CLEAR)]

- This mode moves the optical pick-up to the position durable to vibration and clears all data including preset data stored in the RAM to initial conditions. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select CD function.
3. Press ■ button, ENTER button and GAME button simultaneously. The set will power off automatically.
4. After the "STANDBY" blinking display finish, a message "LOCK" is displayed on the fluorescent indicator tube and the CD ship mode is set.

[CD SHIP MODE (WITHOUT MEMORY CLEAR)]

- This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select CD function.
3. Press [CD] button and [I/⏻] button simultaneously. The set will power off automatically.
4. After the "STANDBY" blinking display finish, a message "LOCK" is displayed on the fluorescent indicator tube and the CD ship mode is set.

[CD POWER MANAGE]

- This mode let you switch on or off power supply to the BU during TUNER function.
- When CD POWER is set to OFF, the power supply to the BU is cut off during TUNER function. It will increase the time taken to access CD when function change from TUNER to CD but it will improve tuner reception.
- When CD POWER is set to ON, the power supply to the BU is not cut off during TUNER function. It will reduce the time taken to access CD when function change from TUNER to CD but it will decrease tuner reception performance.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select CD function.
3. Press [I/⏻] button to turn the set OFF.
4. Press [■] button and [I/⏻] button simultaneously. The set will power on automatically.
5. The message "CD POWER ON" or "CD POWER OFF" will be displayed on the fluorescent indicator tube.

[CD TRAY LOCK MODE]

- This mode let you lock the disc trays. When this mode is activated, the disc tray will not open when [⏏ OPEN/CLOSE] button or [EX-CHANGE/DISC SKIP] button is pressed. The message "LOCKED" will be displayed in the will be displayed on the fluorescent indicator tube.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select CD function.
3. Press [■] button and [⏏ OPEN/CLOSE] button simultaneously and hold down until "LOCKED" or "UNLOCKED" displayed on the fluorescent indicator tube (around 5 seconds).

[VIDEO/MD SWITCHING]

- This mode let you switch from VIDEO to MD and vice-versa.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select VIDEO function.
3. Press [VIDEO/MD] button and [I/⏻] button simultaneously. The function will change to MD. Press the same buttons again to change from MD to VIDEO.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads pinch rollers
   erase head rubber belts
   capstan idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.96 N • m to 14.02 N • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	9.80 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	9.80 N • m 100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment

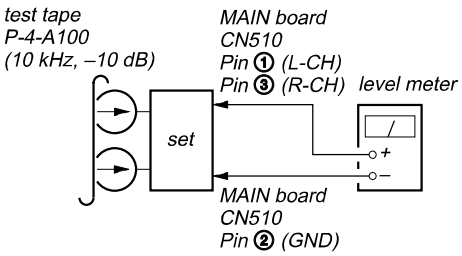
RECORD/PLAYBACK HEAD AZIMUTH ADJUST-MENT

DECK A **DECK B**

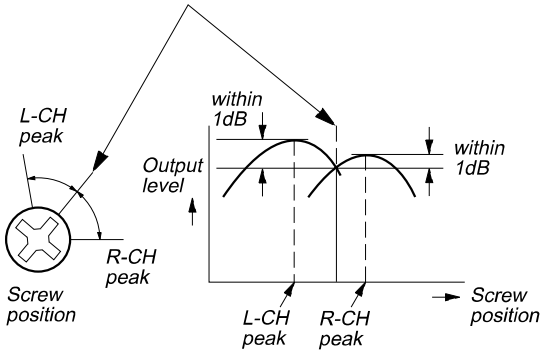
Note: Perform this adjustments for both decks

Procedure:

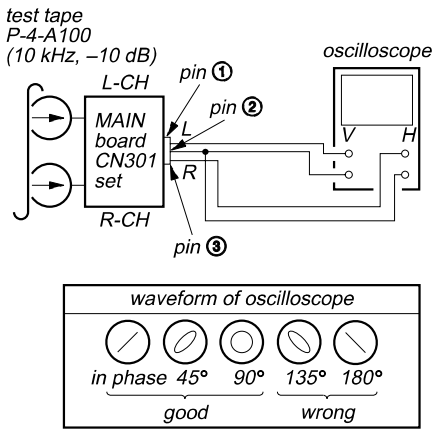
1. Mode: Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

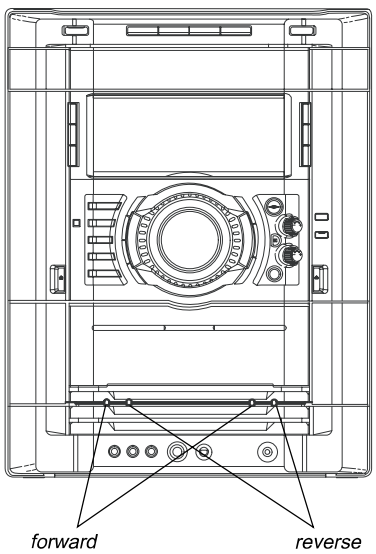


3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



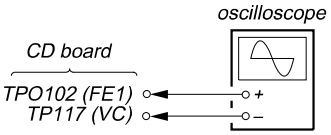
CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MW impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-curve Check

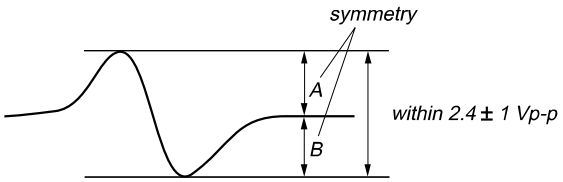
Connection:



Procedure:

1. Connect an oscilloscope to test point TPO102 (FE1) and TP 117(VC) on the CD board.
2. Turn the power on.
3. Put the disc (YEDS-18) in and turned power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out)
4. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2.4 ± 1 Vp-p.

S-curve waveform



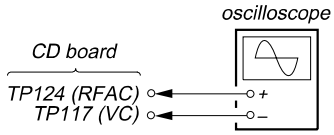
Note:

- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

Checking Location: CD board (SIDE B)
(See page 24.)

RFAC Level Check

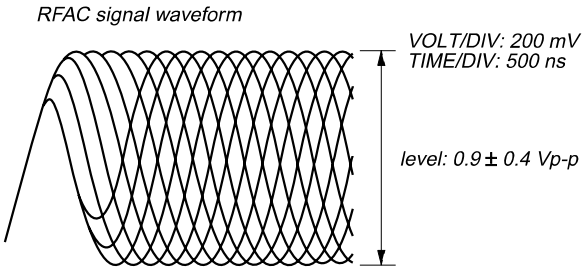
Connection:



Procedure:

1. Connect an oscilloscope to test point TP124 (RFAC) and TP 117(VC) on the CD board.
2. Turn the power on.
3. Put the disc (YEDS-18) in to playback the number five track.
4. Confirm that oscilloscope waveform is clear and check RFAC signal level is correct or not.

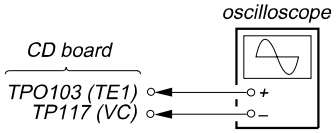
Note: A clear RFAC signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



Checking Location: CD board (SIDE B)
(See page 24.)

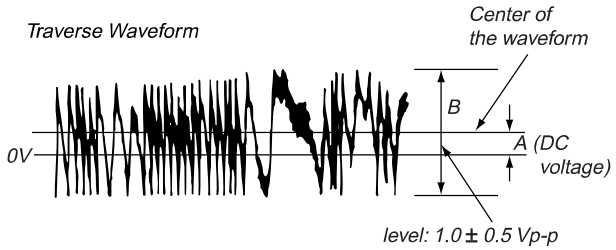
E-F Balance Check

Connection:



Procedure:

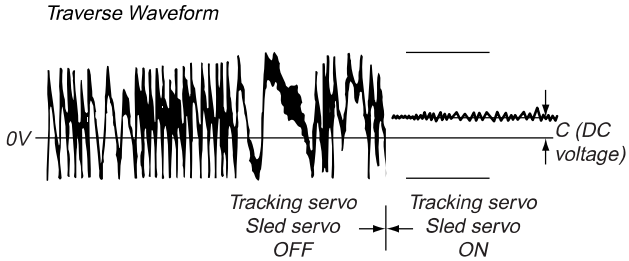
1. Connect an oscilloscpe to test point TPO103 (TE1) and TP117 (VC) on the CD board.
2. Turn the power on.
3. Select the function "CD".
4. Press three buttons of [ENTER], [▶▶], and [SURRUUND MODE] simultaneously to set the CD service mode.
5. Put the disc (YEDS-18) in to playback the number five track.
6. Press the [⏮] button. The message "TRAVERSE" is displayed. (The tracking servo and the sledding servo are turned OFF)
7. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%



8. Press the [⏮] button. The message "TRAVERSE" is displayed. (The tracking servo and sledding servo are turned ON)
   Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 5.
9. To exit from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Press three buttons of [■], [CLEAR], and [DISPLAY] simultaneously. (cold reset)

Notes:

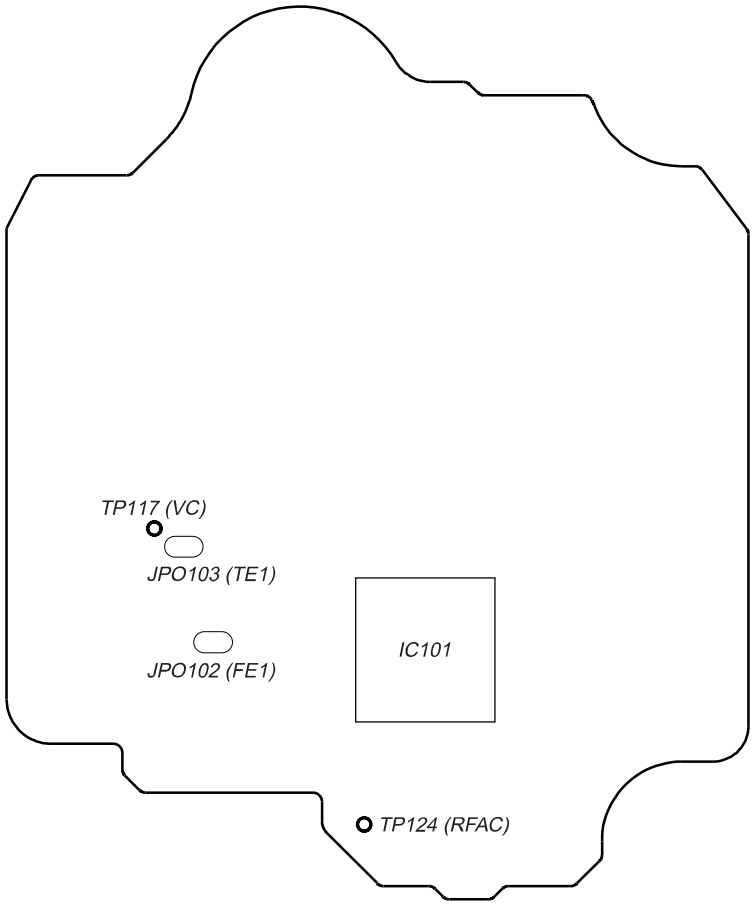
- Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.



Checking Location: CD board (SIDE B) (See page 24.)

Checking Location:

– CD BOARD (SIDE B) –



SECTION 7
DIAGRAMS

For schematic diagrams.
Note:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ! are critical for safety.
Replace only with part number specified.

- : panel designation.
- : B+ Line.
- : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: TUNER (FM/AM)
  ( ): CD PLAY
  < >: TAPE PLAY
  [ ]: TAPE REC
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : TUNER (FM/AM)
  : TAPE PLAY (DECK A)
  : TAPE PLAY (DECK B)
  : RECORD
  : CD PLAY (ANALOG OUT)
  : CD PLAY (DIGITAL OUT)
  : GAME IN (AUDIO)
  : GAME IN (VIDEO)
  : MIC INPUT

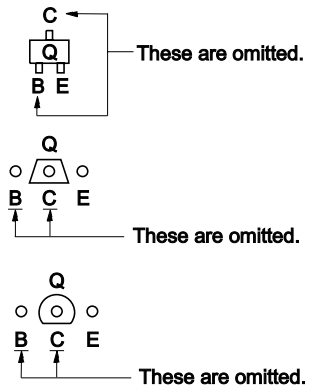
- Abbreviation
  AUS : Australian model
  E2 : 120V AC Area in E model
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  MX : Mexican model

Note on Printed Wiring Boards:
Note:

- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

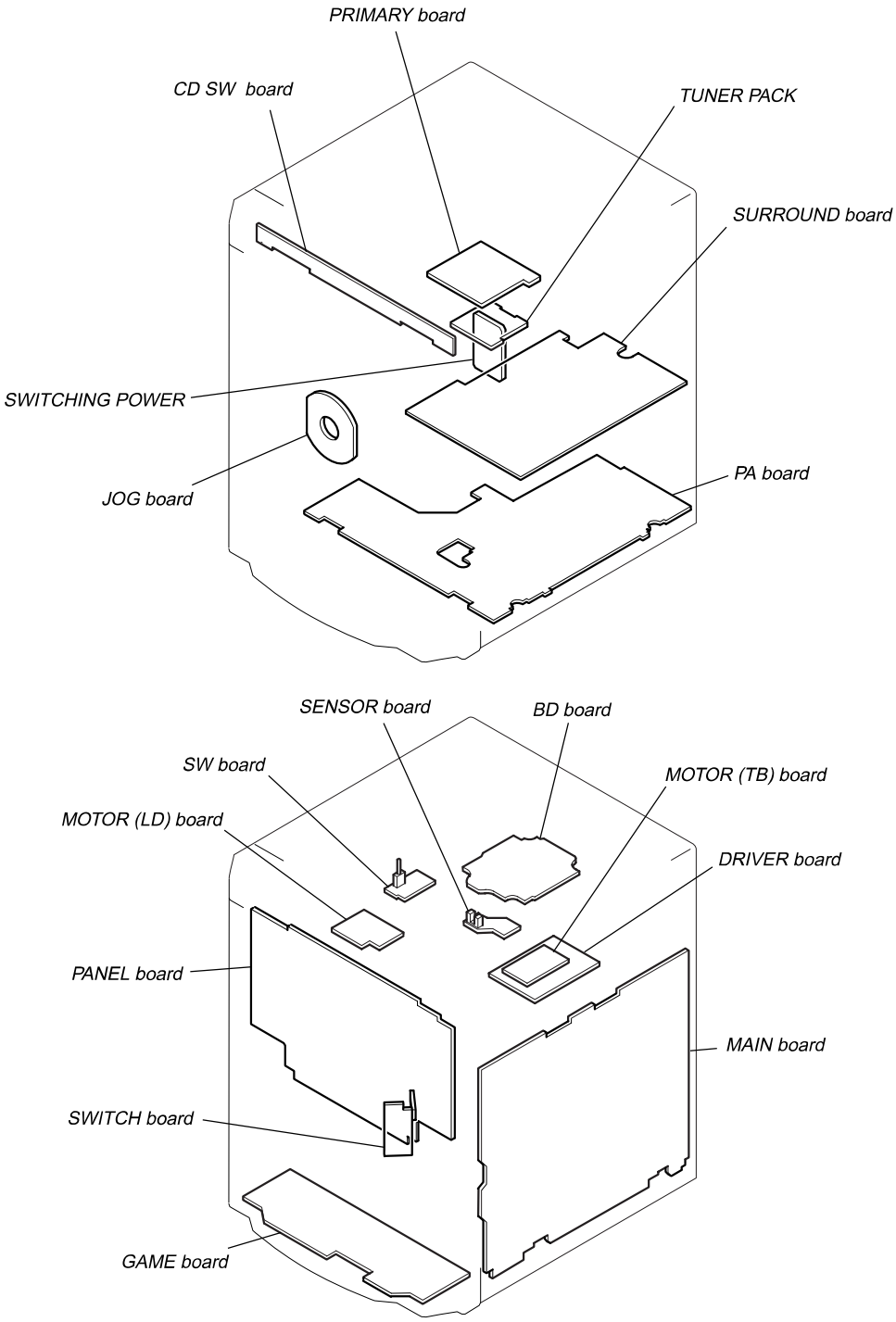
Caution:	
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.

- Indication of transistor.



- Abbreviation
  AUS : Australian model
  E2 : 120V AC Area in E model
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  MX : Mexican model

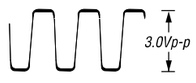
7-1. CIRCUIT BOARD LOCATION



• **WAVEFORMS**

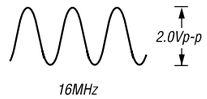
– MAIN BOARD –

① IC401 ⑪ XC-OUT



VOL/DIV : 1 V AC
TIME/DIV : 10 µsec

② IC401 ⑬ X-OUT

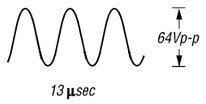


VOL/DIV : 1 V AC
TIME/DIV : 50 nsec

③ T101 ⑤
TAPE REC only

VOL/DIV : 50 V AC
TIME/DIV : 10 µsec

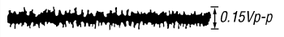
④ T101 ④
TAPE REC only



VOL/DIV : 50 V AC
TIME/DIV : 10 µsec

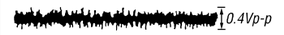
– BD BOARD –

① IC101 ㉑ TEI



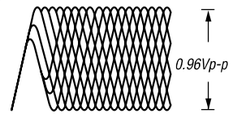
VOL/DIV : 0.2 V AC
TIME/DIV : 0.2 msec

② IC101 ㉓ FEI



VOL/DIV : 0.1 V AC
TIME/DIV : 1 msec

③ IC101 ㊶ RFAC



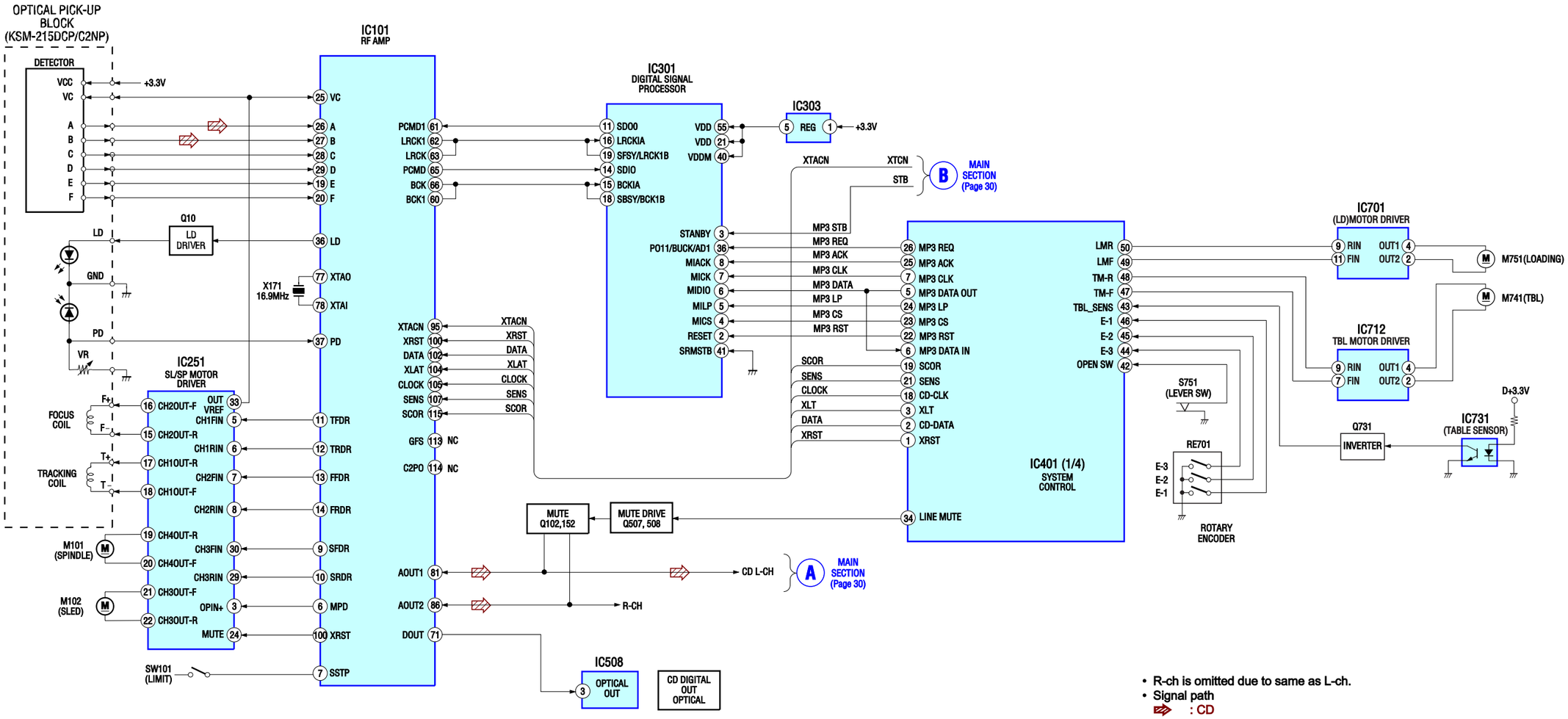
VOL/DIV : 0.2 V AC
TIME/DIV : 0.5 µsec

– PANEL BOARD –

① IC901 ㉜ X OUT

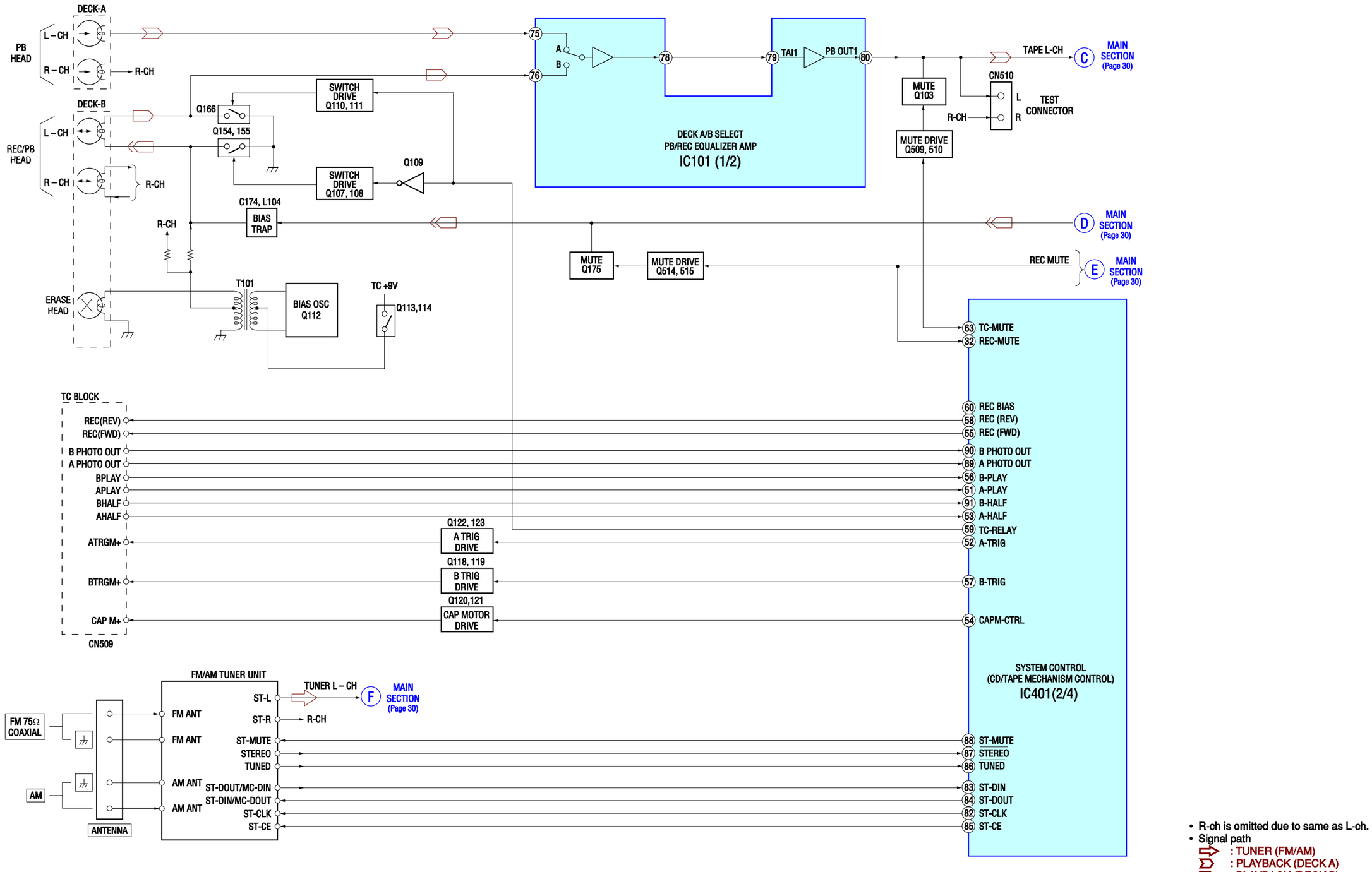
VOL/DIV : 1 V AC
TIME/DIV : 0.2 µsec

7-2. BLOCK DIAGRAM – CD SECTION –



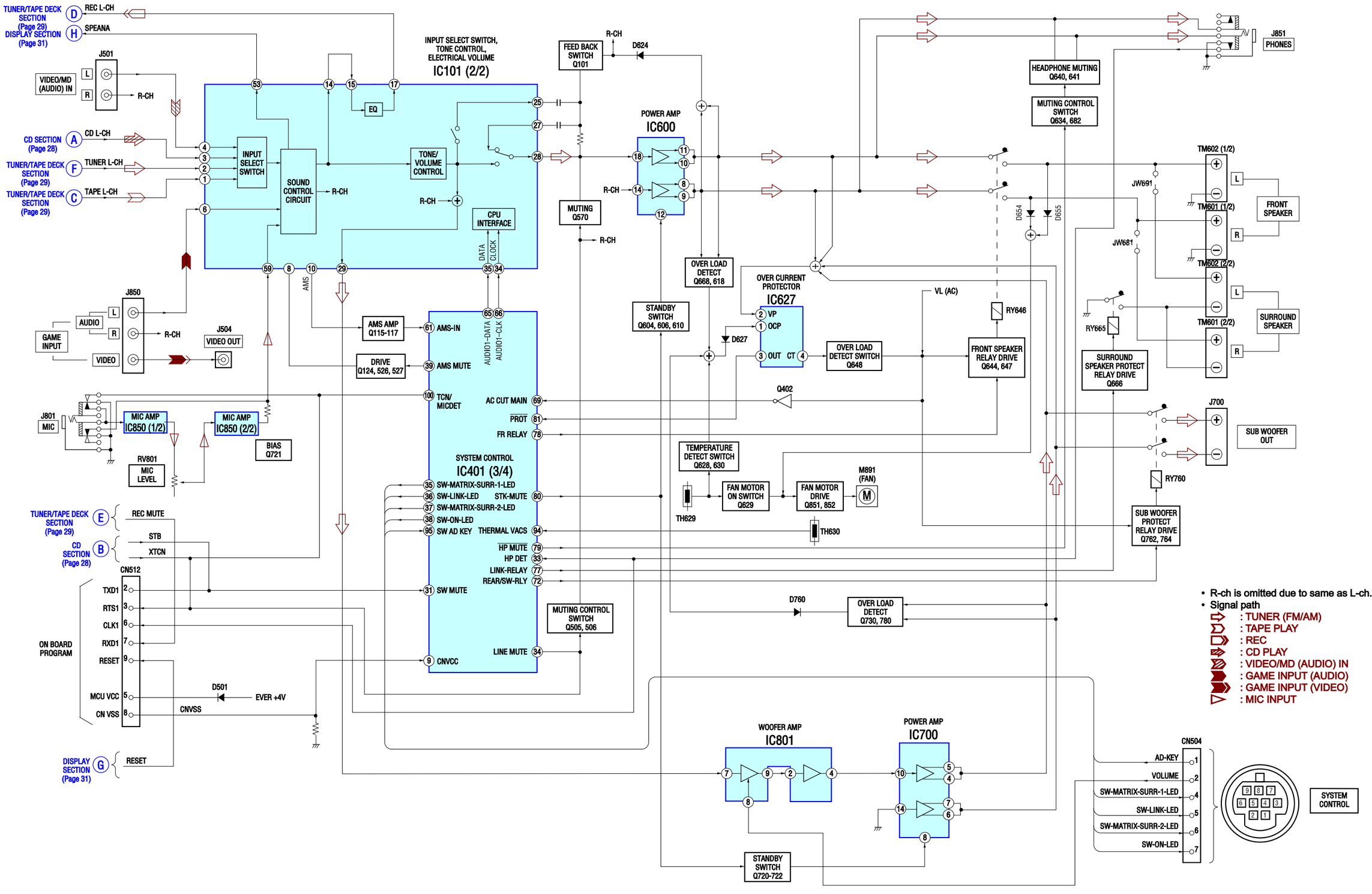
- R-ch is omitted due to same as L-ch.
- Signal path
  ⇨ : CD

7-3. BLOCK DIAGRAM – TUNER/TAPE SECTION –

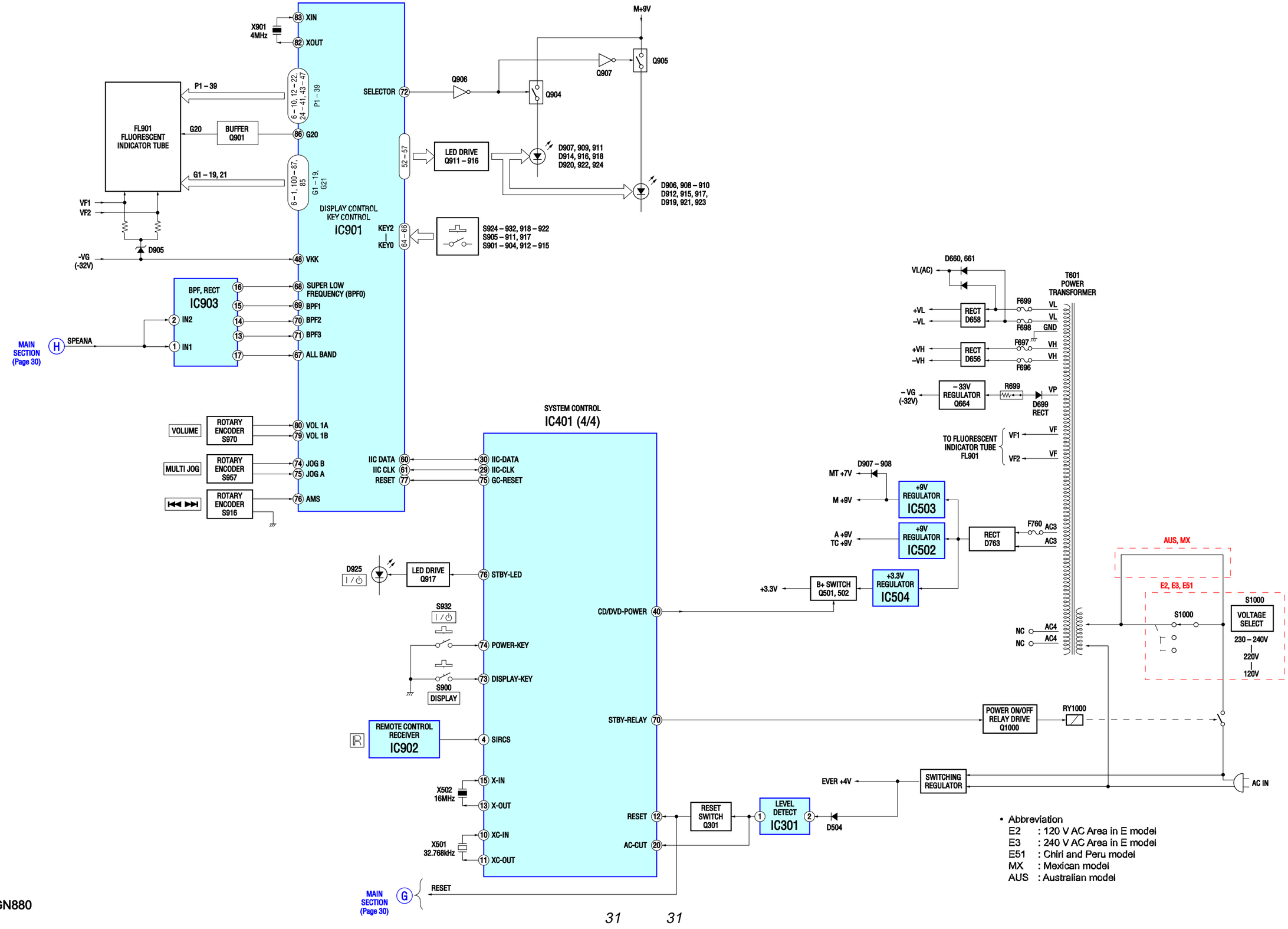


- R-ch is omitted due to same as L-ch.
- Signal path
  - : TUNER (FM/AM)
  - : PLAYBACK (DECK A)
  - : PLAYBACK (DECK B)
  - : RECORD

7-4. BLOCK DIAGRAM – MAIN SECTION –



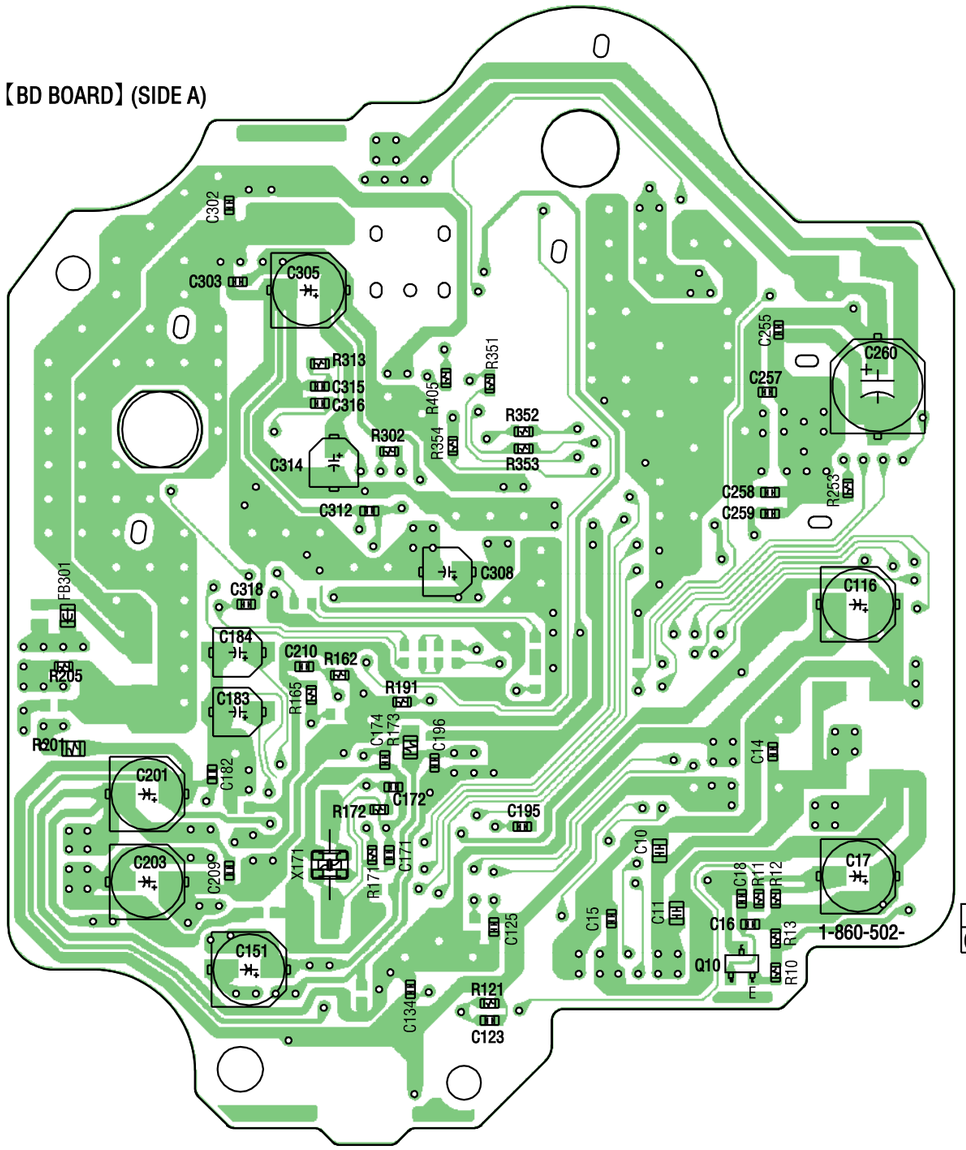
7-5. BLOCK DIAGRAM – DISPLAY/POWER SECTION –



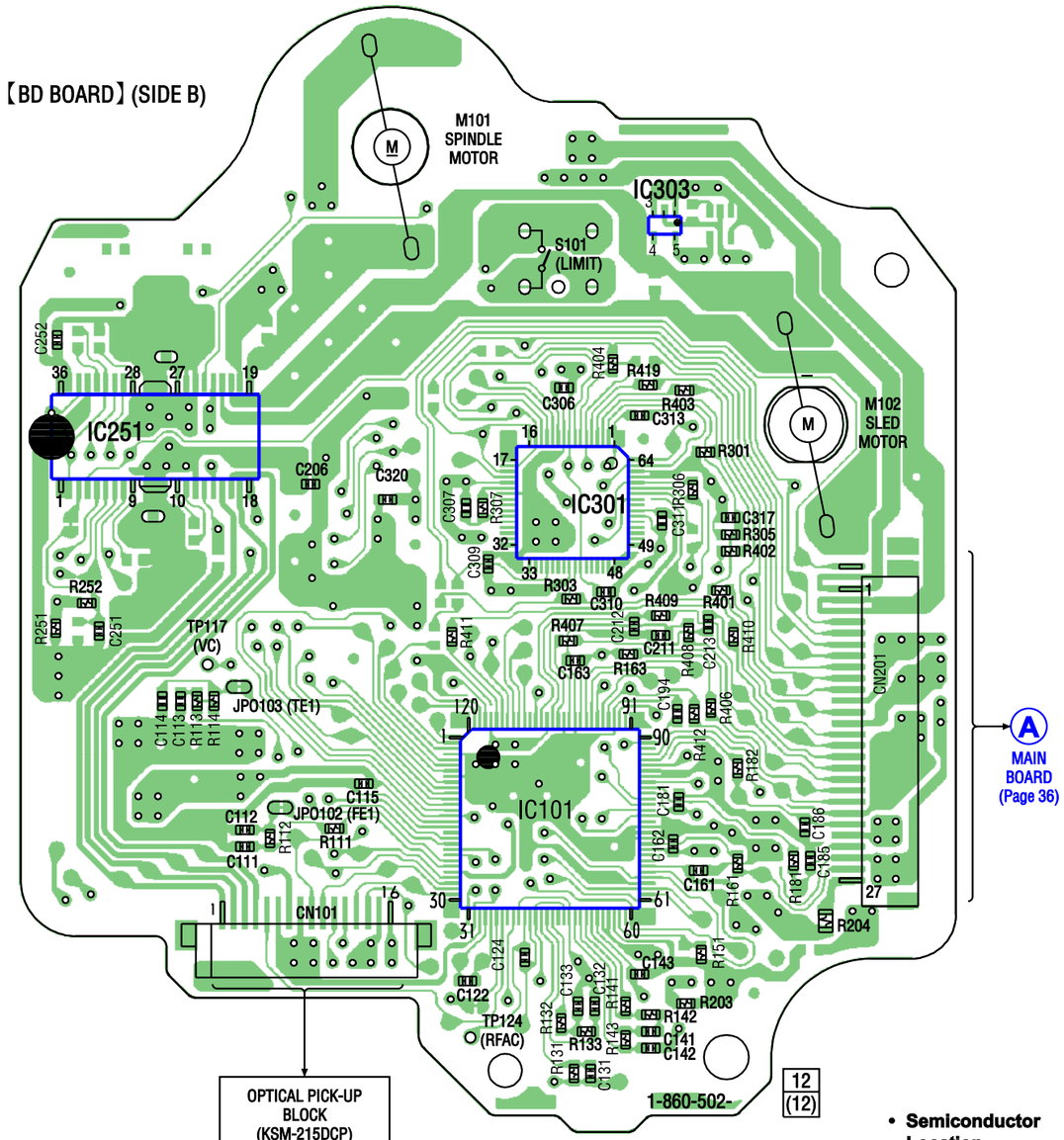
7-6. PRINTED WIRING BOARD – BD SECTION –

• See page 26 for Circuit Boards Location.

【BD BOARD】(SIDE A)



【BD BOARD】(SIDE B)

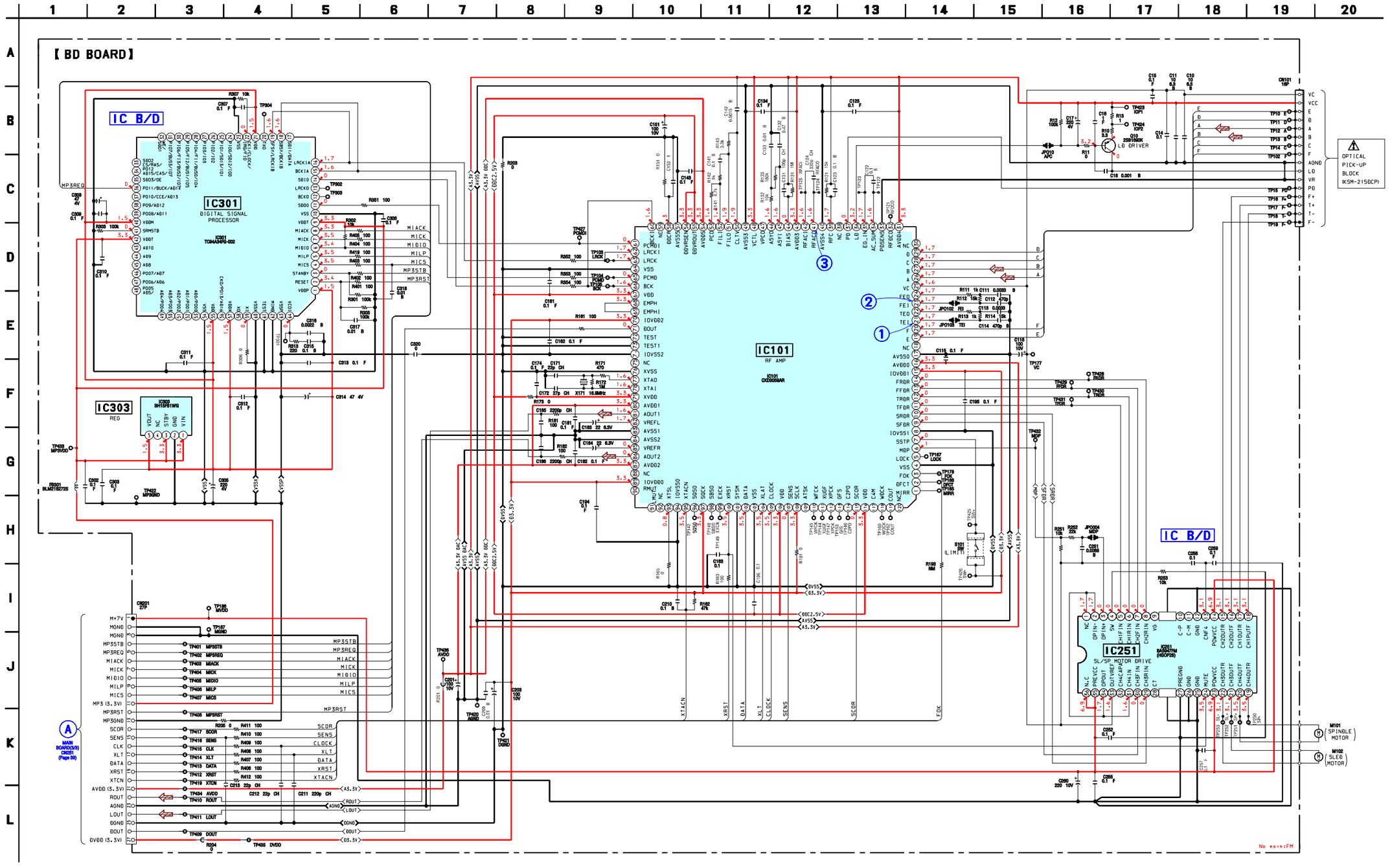


• **Semiconductor Location**

Ref. No.	Location
IC101	D-8
IC251	C-6
IC301	C-8
IC303	B-8
Q10	E-4

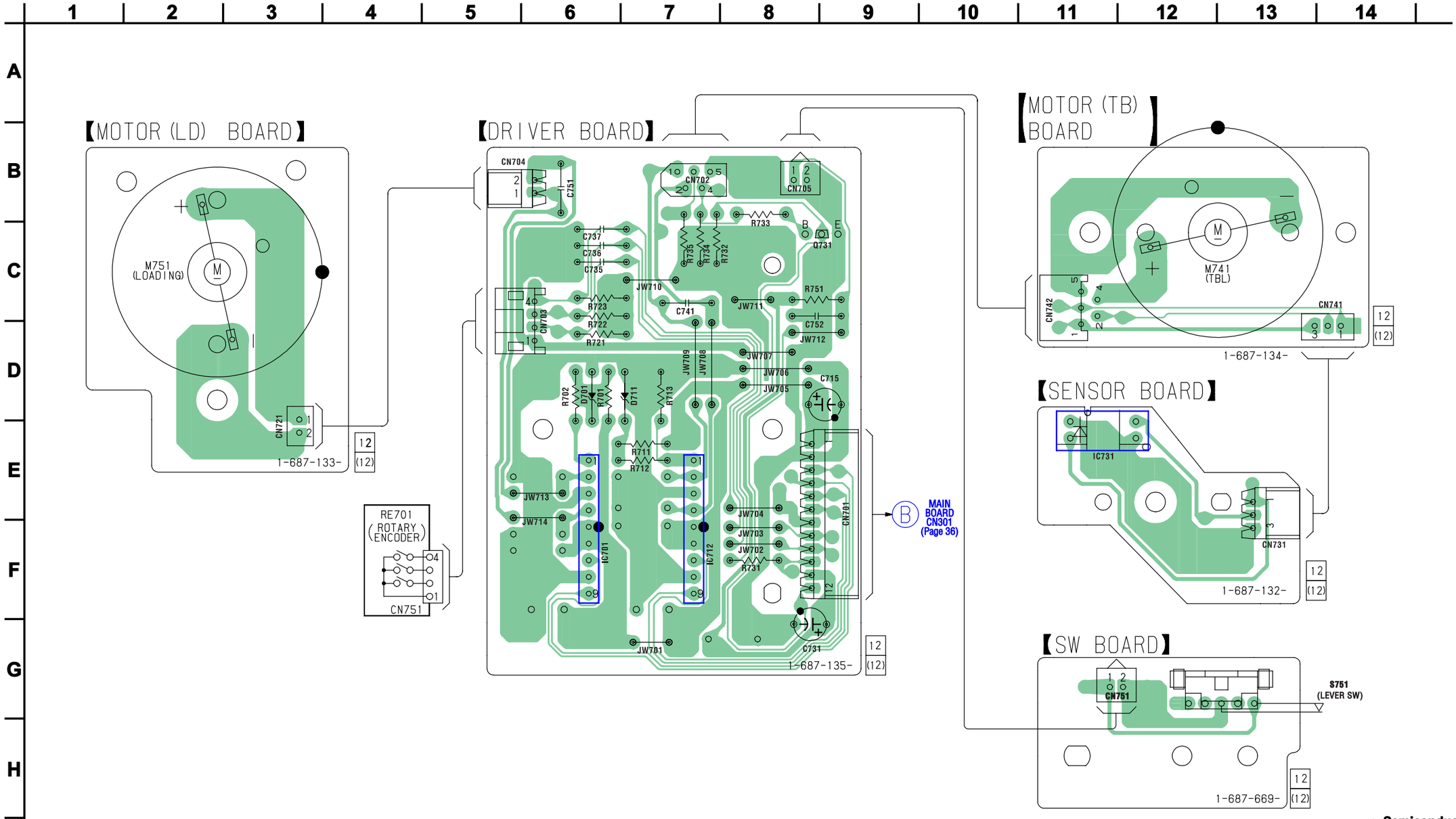
7-7. SCHEMATIC DIAGRAM – BD BOARD –

• See page 52 for IC Pin Function Description.



7-8. PRINTED WIRING BOARD – CD MECHANISM BOARD –

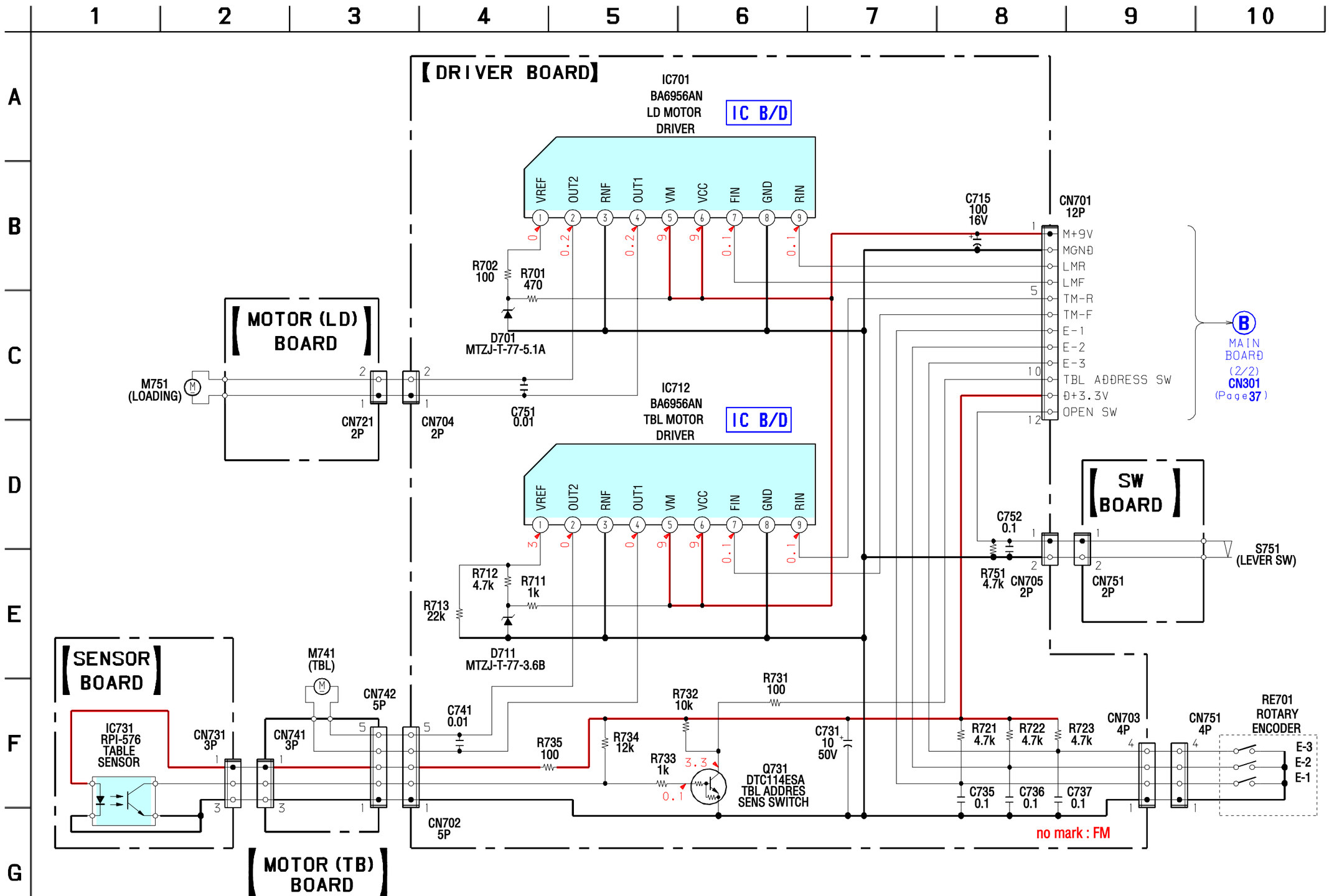
• See page 26 for Circuit Boards Location.



- **Semiconductor Location**

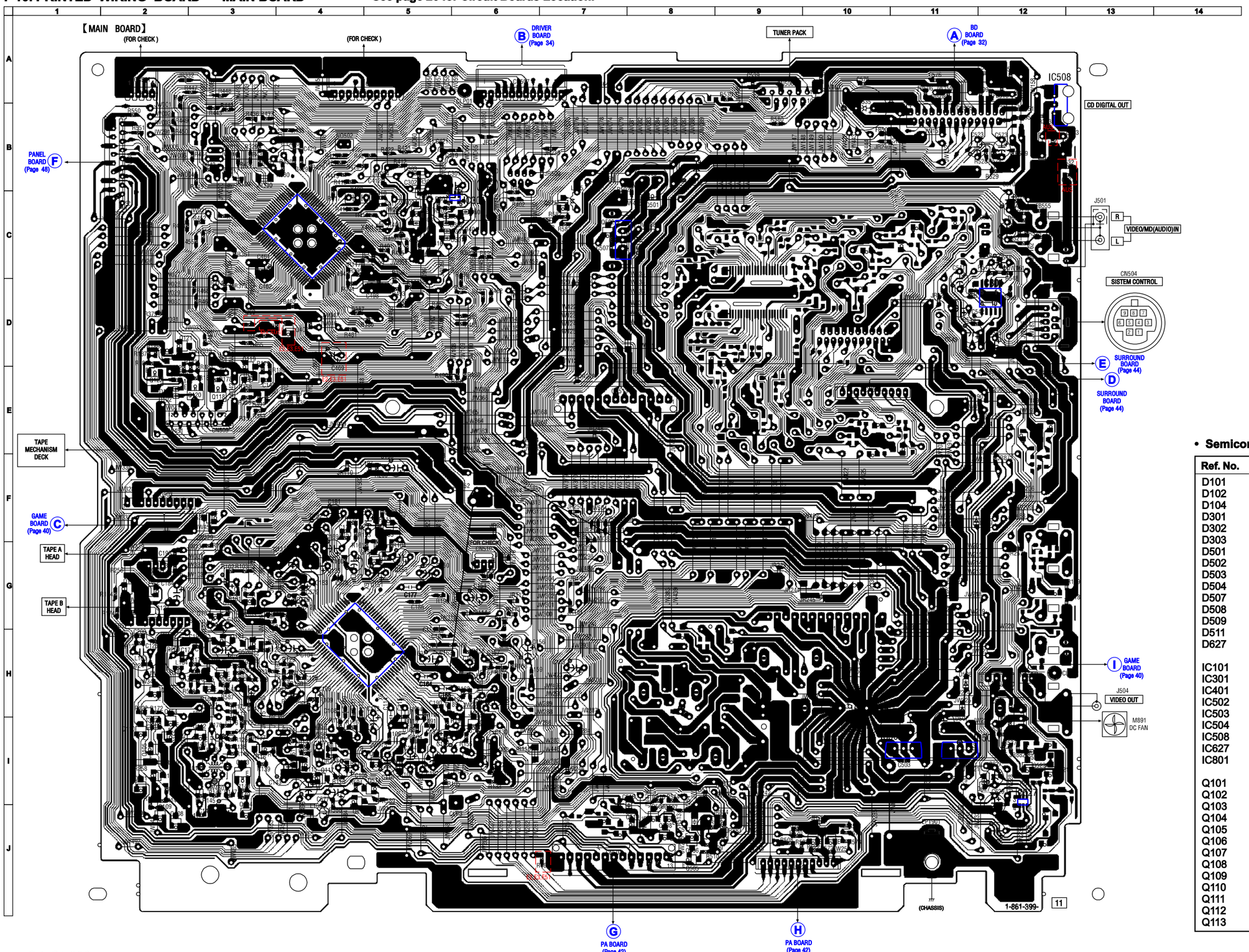
Ref. No.	Location
D701	D-6
D711	D-7
IC701	F-6
IC712	F-7
IC731	E-11
Q731	C-9

7-9. SCHEMATIC DIAGRAM – CD MECHANISM BOARD –



7-10. PRINTED WIRING BOARD – MAIN BOARD –

• See page 26 for Circuit Boards Location.

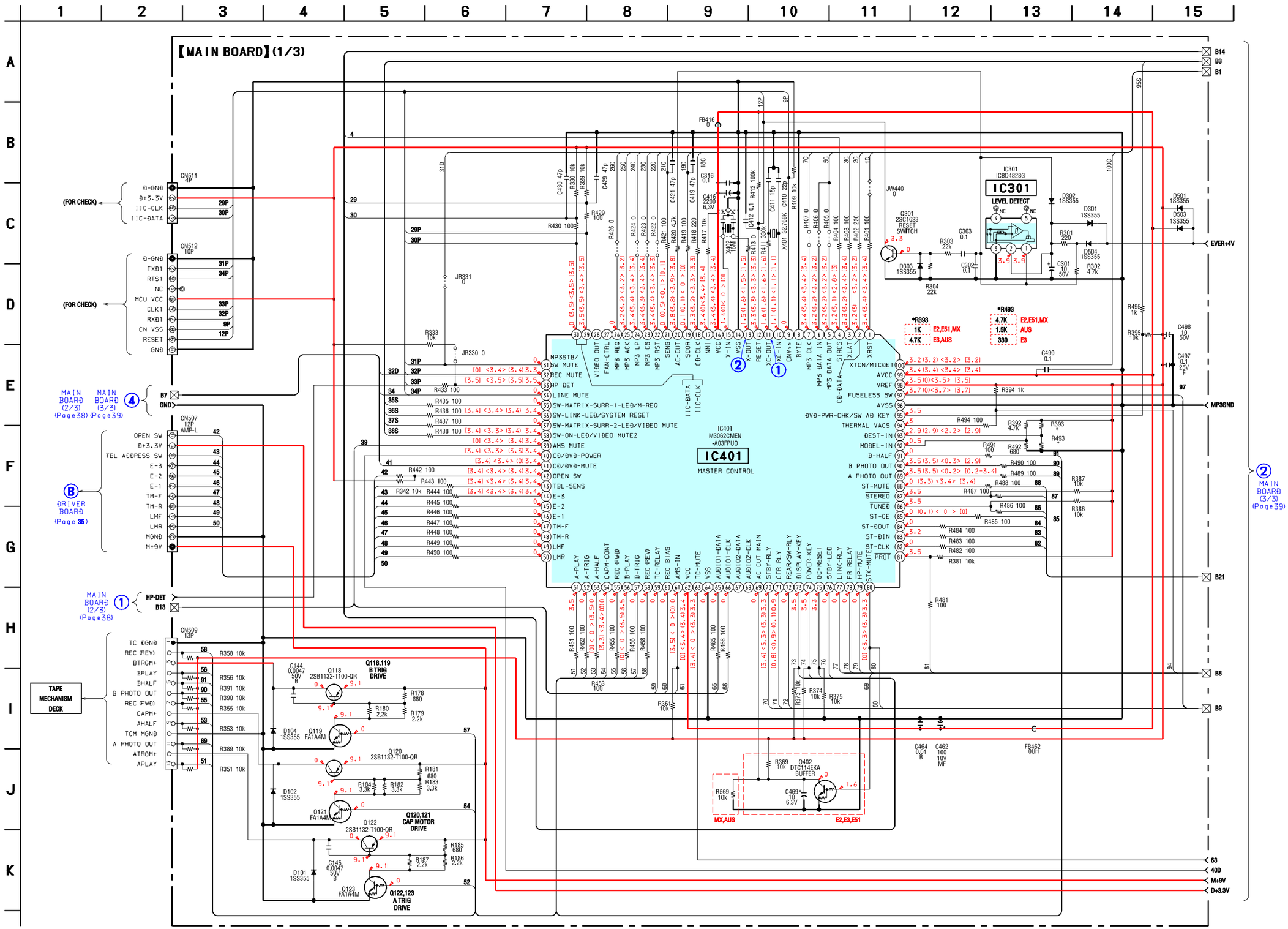


• Semiconductor Location

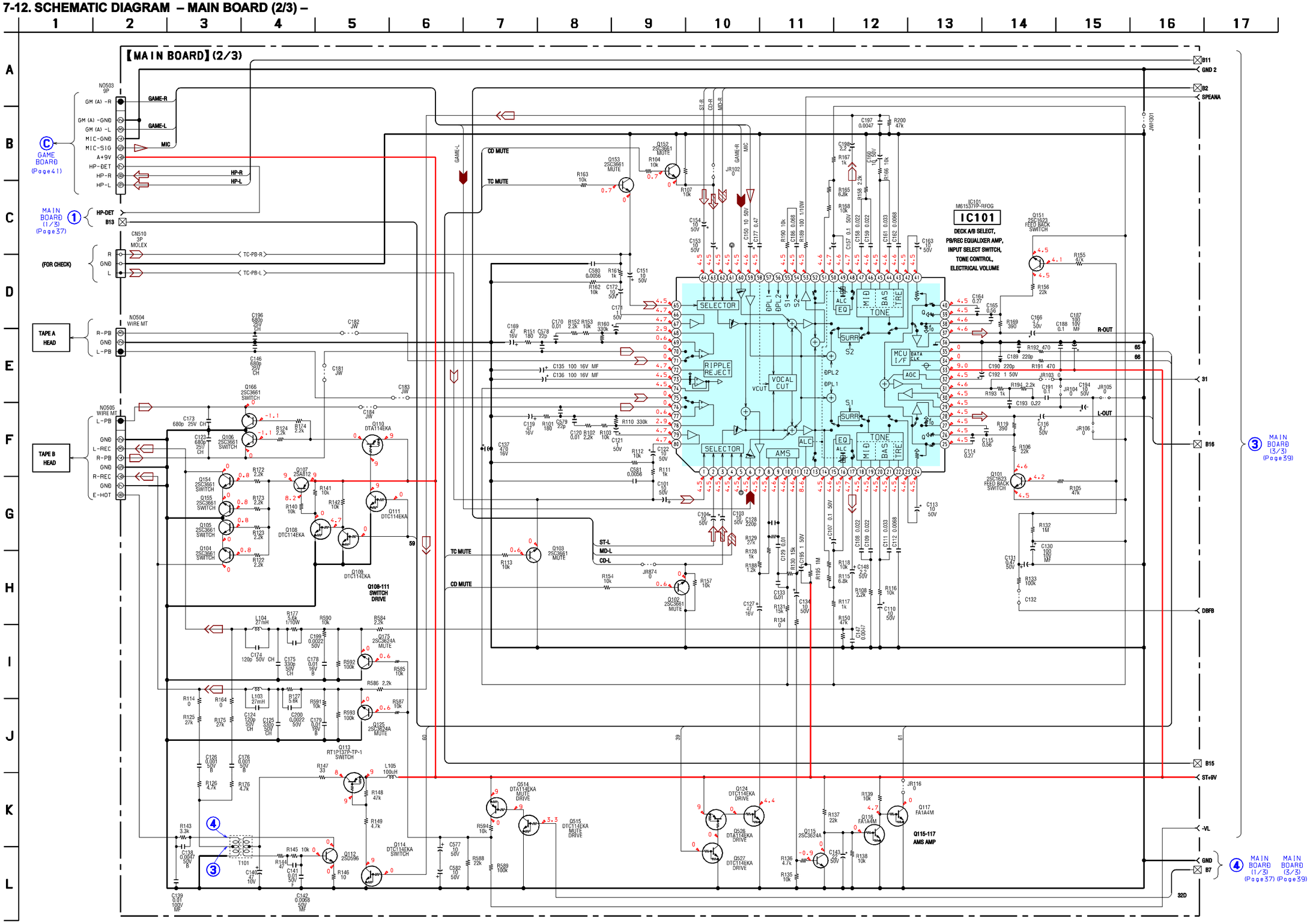
Ref. No.	Location	Ref. No.	Location
D101	E-2	Q114	J-3
D102	E-2	Q115	I-4
D104	E-3	Q116	I-3
D301	C-5	Q117	I-4
D302	C-5	Q118	E-3
D303	C-5	Q119	D-3
D501	C-5	Q120	E-3
D502	C-7	Q121	D-2
D503	C-6	Q122	E-2
D504	C-5	Q123	D-2
D507	H-11	Q124	H-3
D508	H-11	Q125	H-3
D509	F-11	Q151	I-6
D511	I-12	Q152	G-5
D627	I-12	Q153	F-5
		Q154	H-2
IC101	H-4	Q155	I-2
IC301	C-6	Q166	G-2
IC401	C-4	Q175	H-3
IC502	I-11	Q301	C-5
IC503	I-11	Q402	D-4
IC504	C-8	Q501	C-8
IC508	A-12	Q502	C-7
IC627	I-12	Q505	J-8
IC801	D-12	Q506	J-8
		Q507	J-8
Q101	I-5	Q508	J-8
Q102	G-3	Q509	J-8
Q103	G-3	Q510	J-8
Q104	H-2	Q514	I-5
Q105	I-2	Q515	I-4
Q106	G-2	Q520	J-10
Q107	I-2	Q521	I-12
Q108	J-2	Q523	I-12
Q109	J-2	Q524	I-12
Q110	I-2	Q525	C-7
Q111	I-2	Q526	H-3
Q112	I-3	Q527	F-3
Q113	I-3	Q570	J-10

7-11. SCHEMATIC DIAGRAM – MAIN BOARD (1/3) –

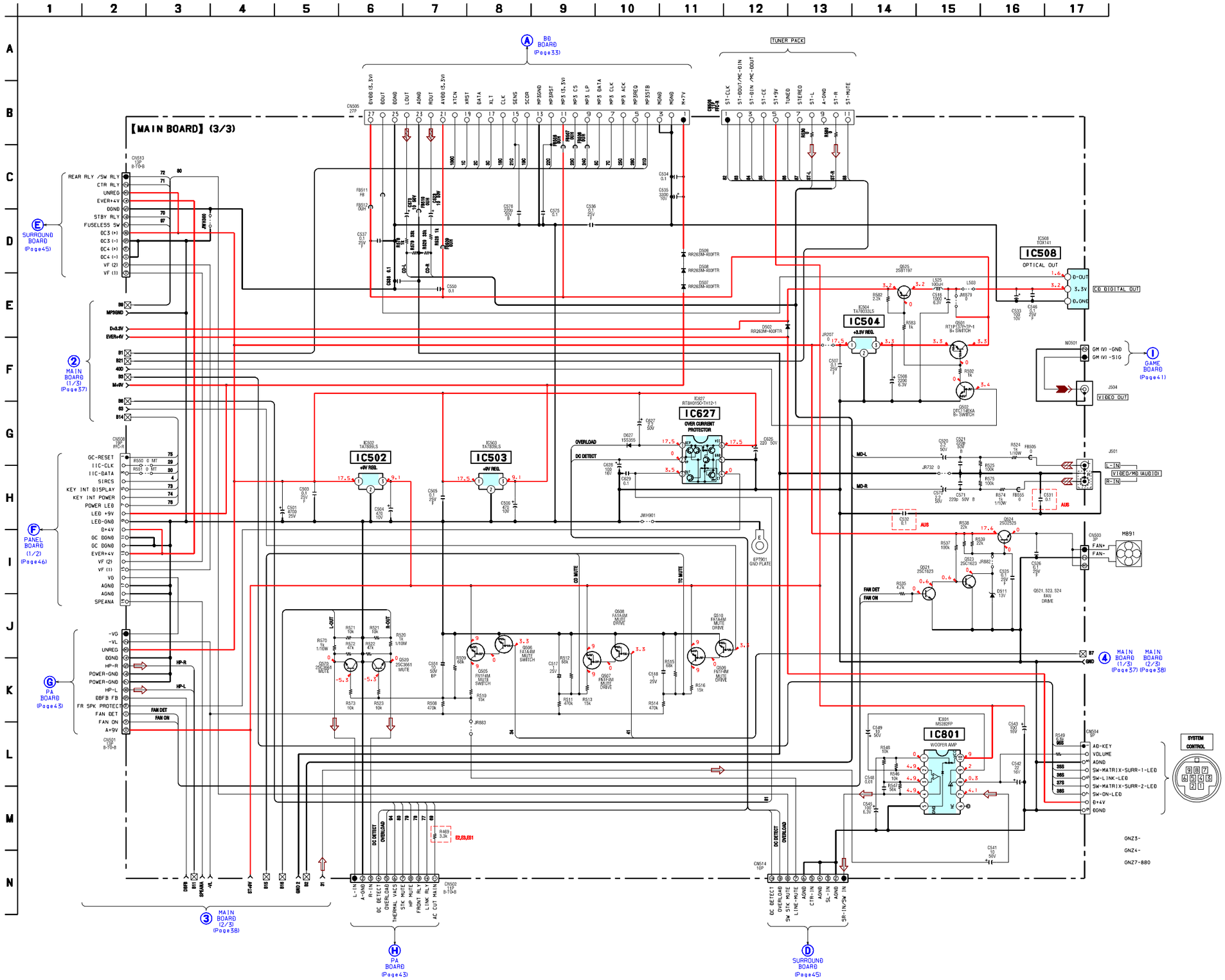
• See page 56 for IC Pin Function Description.



7-12. SCHEMATIC DIAGRAM – MAIN BOARD (2/3) –

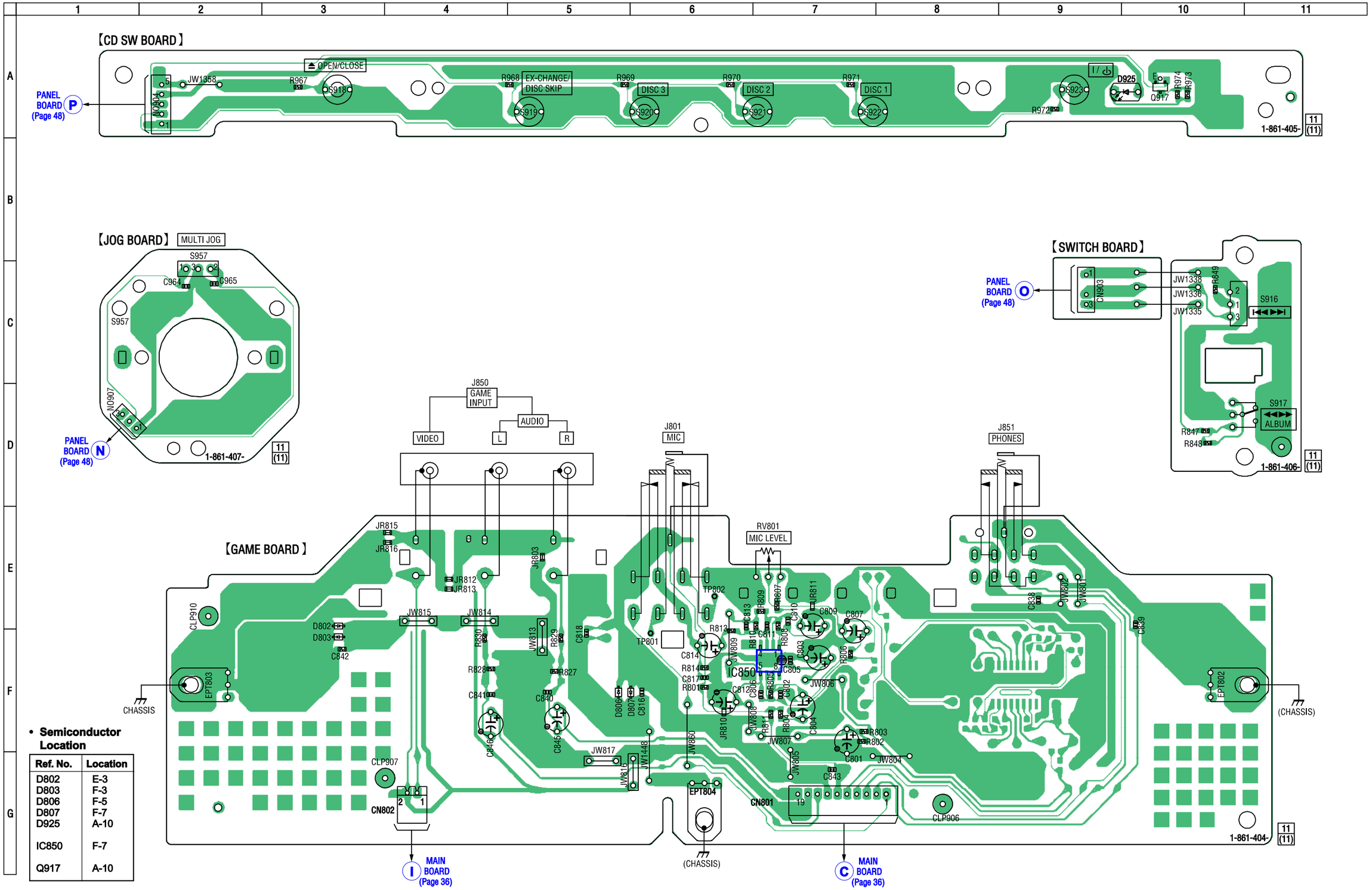


7-13. SCHEMATIC DIAGRAM – MAIN BOARD (3/3)–



7-14. PRINTED WIRING BOARD – GAME, CD SWITCH BOARD –

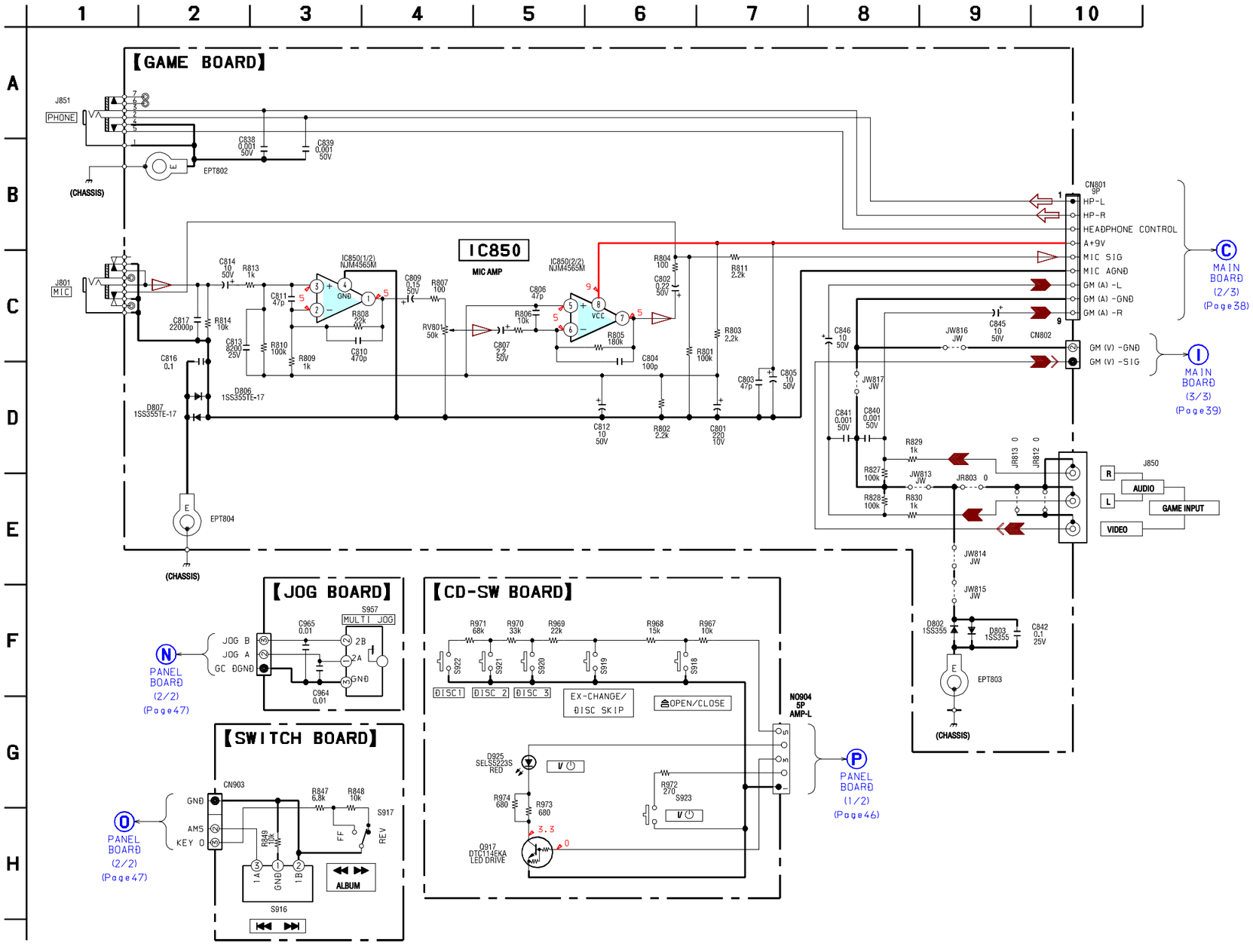
• See page 26 for Circuit Boards Location.



- **Semiconductor Location**

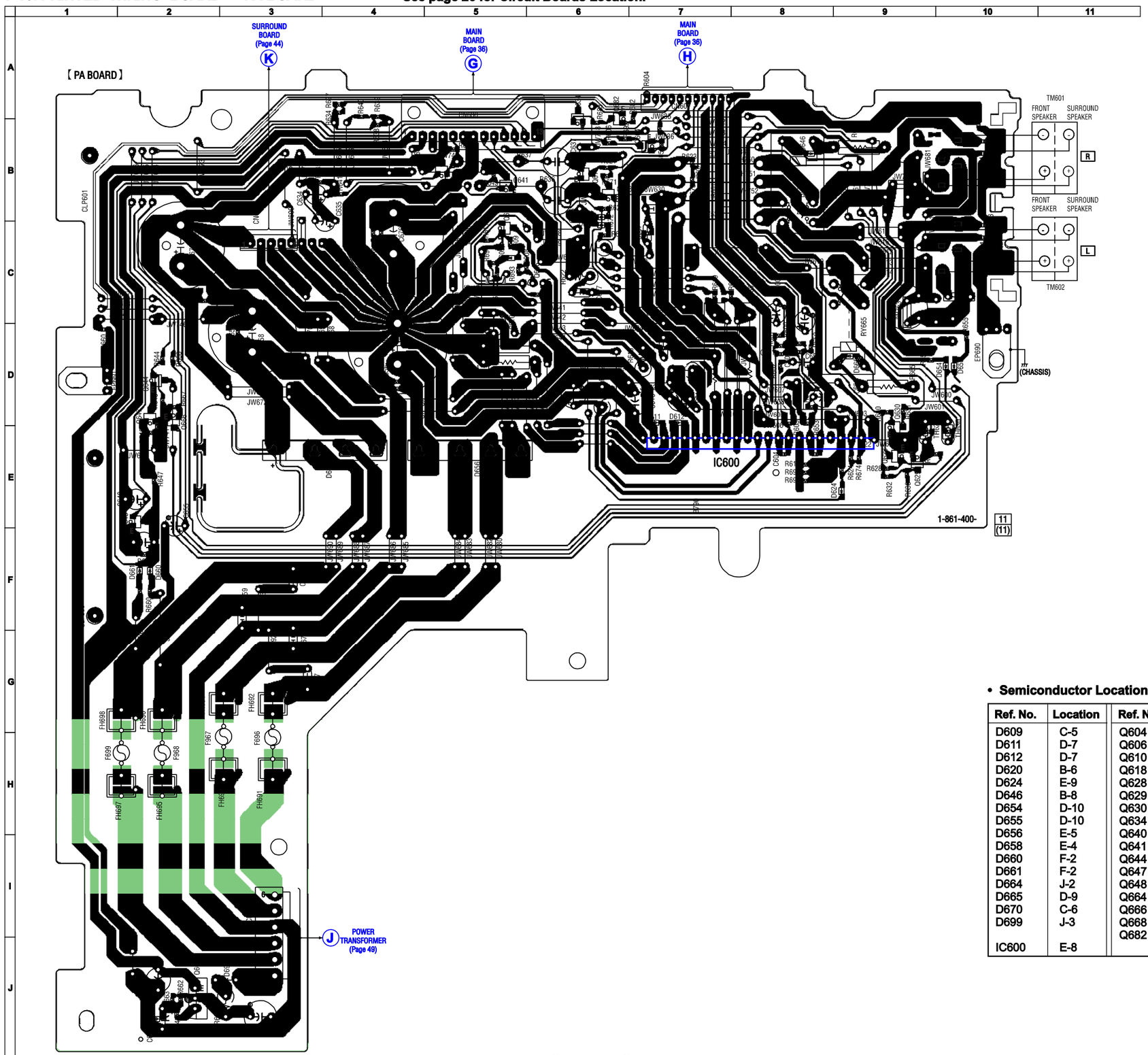
Ref. No.	Location
D802	E-3
D803	F-3
D806	F-5
D807	F-7
D925	A-10
IC850	F-7
Q917	A-10

7-15. SCHEMATIC DIAGRAM – GAME, CD SWITCH BOARD –



7-16. PRINTED WIRING BOARD – PA BOARD –

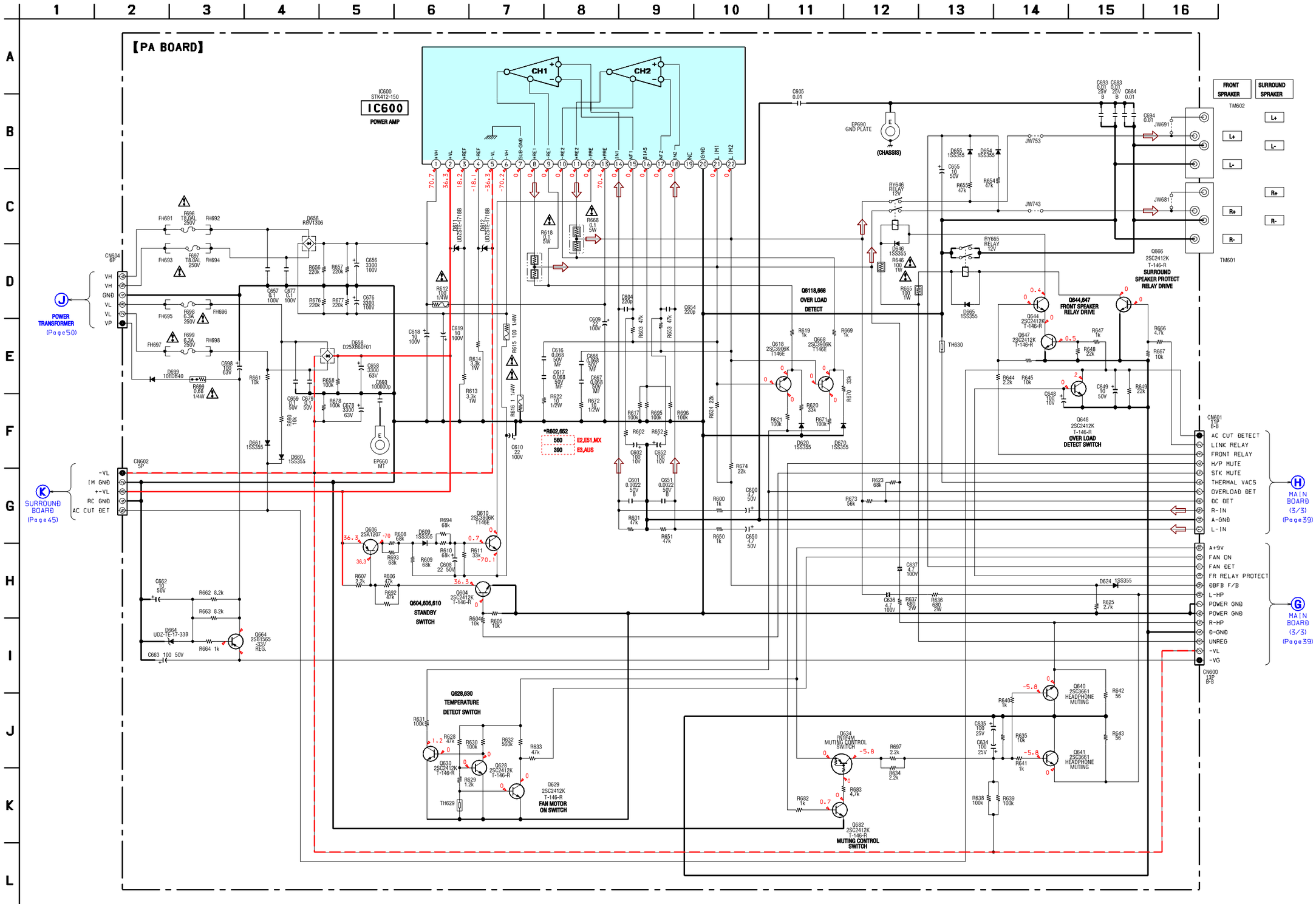
• See page 26 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D609	C-5	Q604	B-7
D611	D-7	Q606	C-6
D612	D-7	Q610	C-5
D620	B-6	Q618	B-6
D624	E-9	Q628	E-9
D646	B-8	Q629	E-9
D654	D-10	Q630	D-9
D655	D-10	Q634	B-6
D656	E-5	Q640	B-5
D658	E-4	Q641	B-5
D660	F-2	Q644	D-2
D661	F-2	Q647	D-2
D664	J-2	Q648	E-2
D665	D-9	Q664	J-2
D670	C-6	Q666	D-2
D699	J-3	Q668	B-6
		Q682	A-6
IC600	E-8		

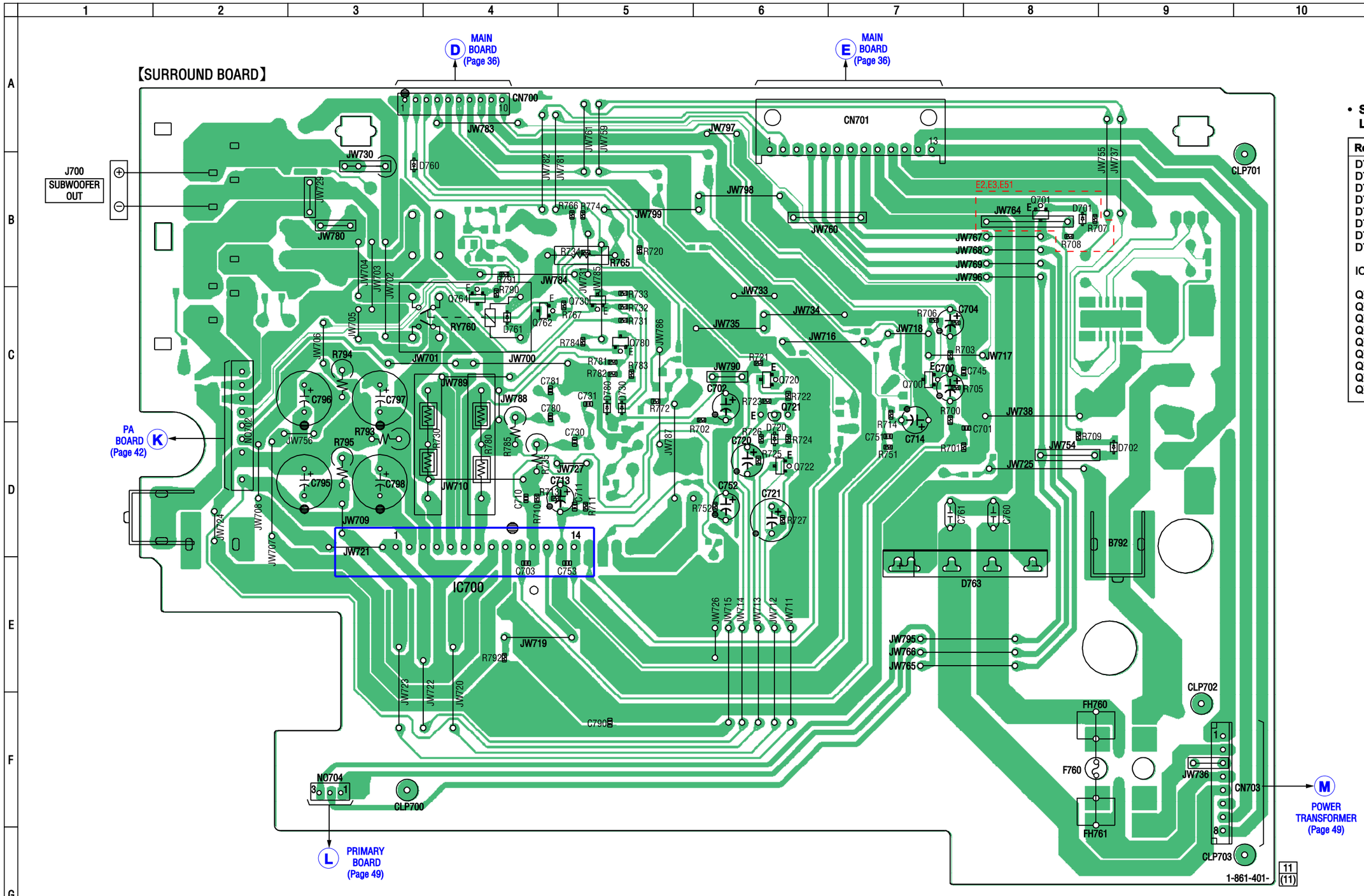
7-17. SCHEMATIC DIAGRAM – PA BOARD –



7-18. PRINTED WIRING BOARD – SURROUND BOARD –

• See page 26 for Circuit Boards Location.

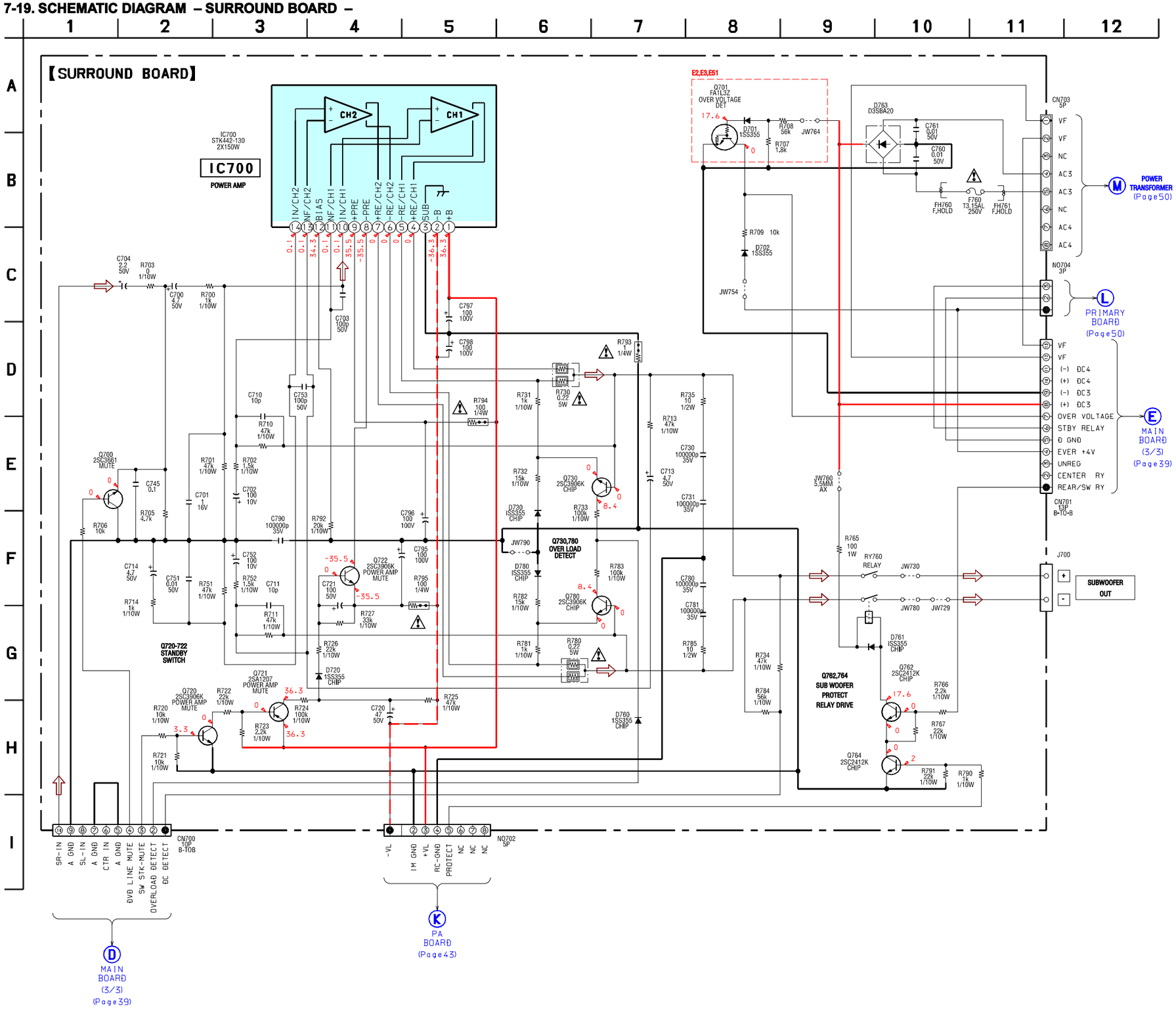
【SURROUND BOARD】



- **Semiconductor Location**

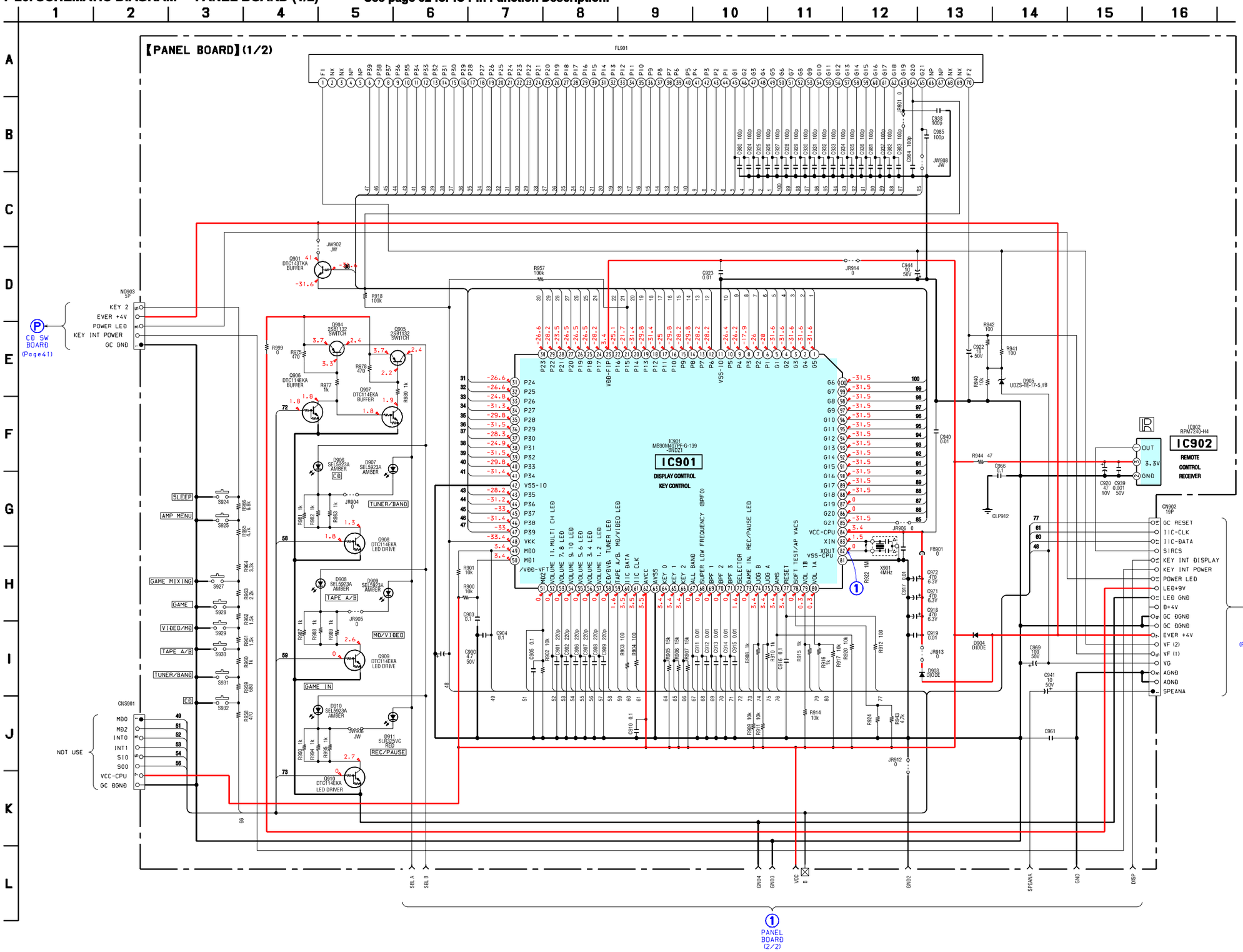
Ref. No.	Location
D701	B-8
D702	D-9
D720	D-6
D730	C-5
D760	B-3
D761	C-4
D763	E-8
D780	C-5
IC700	D-4
Q700	C-7
Q701	B-8
Q720	C-6
Q721	C-6
Q722	D-6
Q730	C-5
Q762	C-4
Q764	C-4
Q780	C-5

7-19. SCHEMATIC DIAGRAM – SURROUND BOARD –

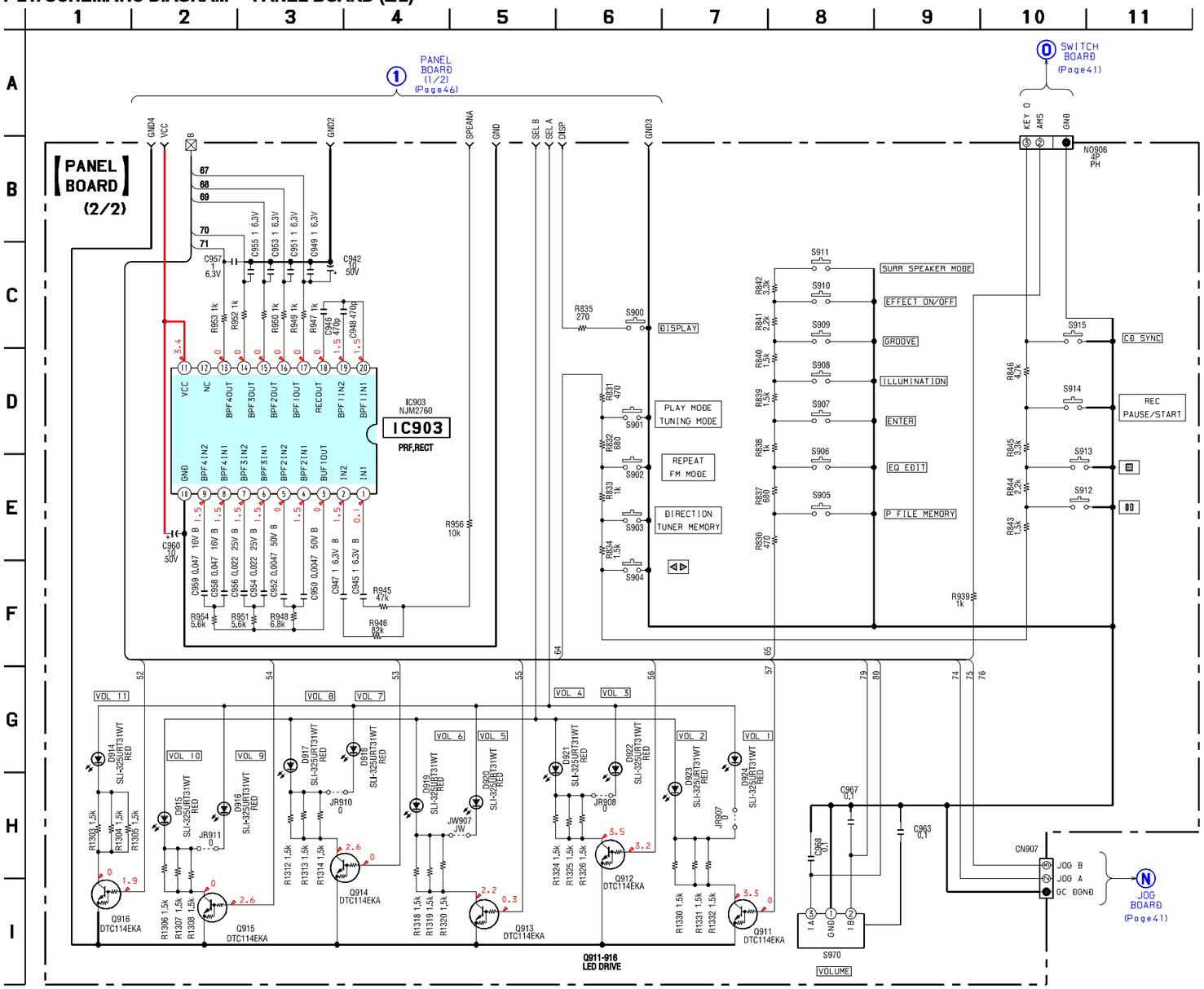


7-20. SCHEMATIC DIAGRAM – PANEL BOARD (1/2) –

• See page 52 for IC Pin Function Description.

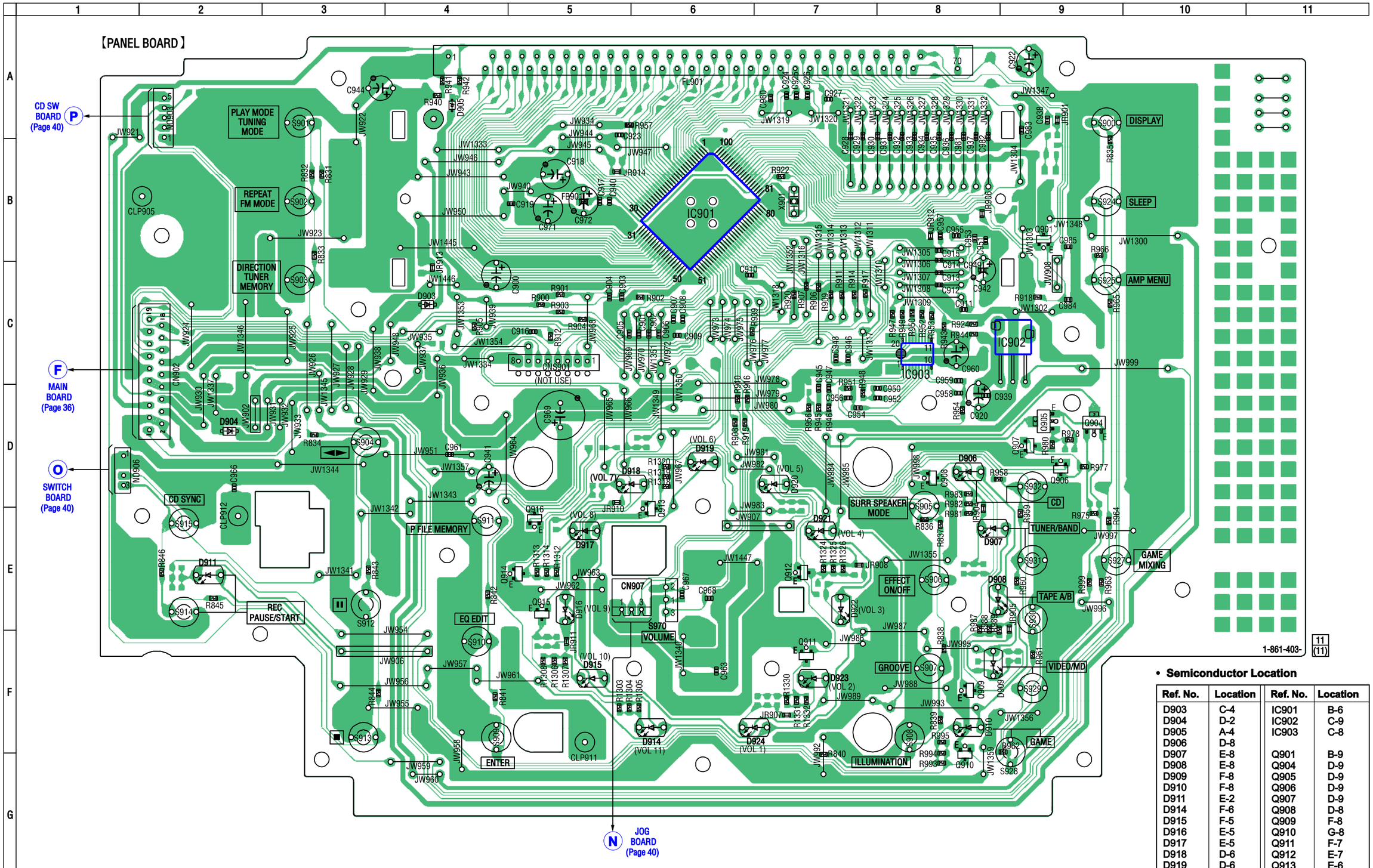


7-21. SCHEMATIC DIAGRAM – PANEL BOARD (2/2) –



7-22. PRINTED WIRING BOARD – PANEL BOARD –

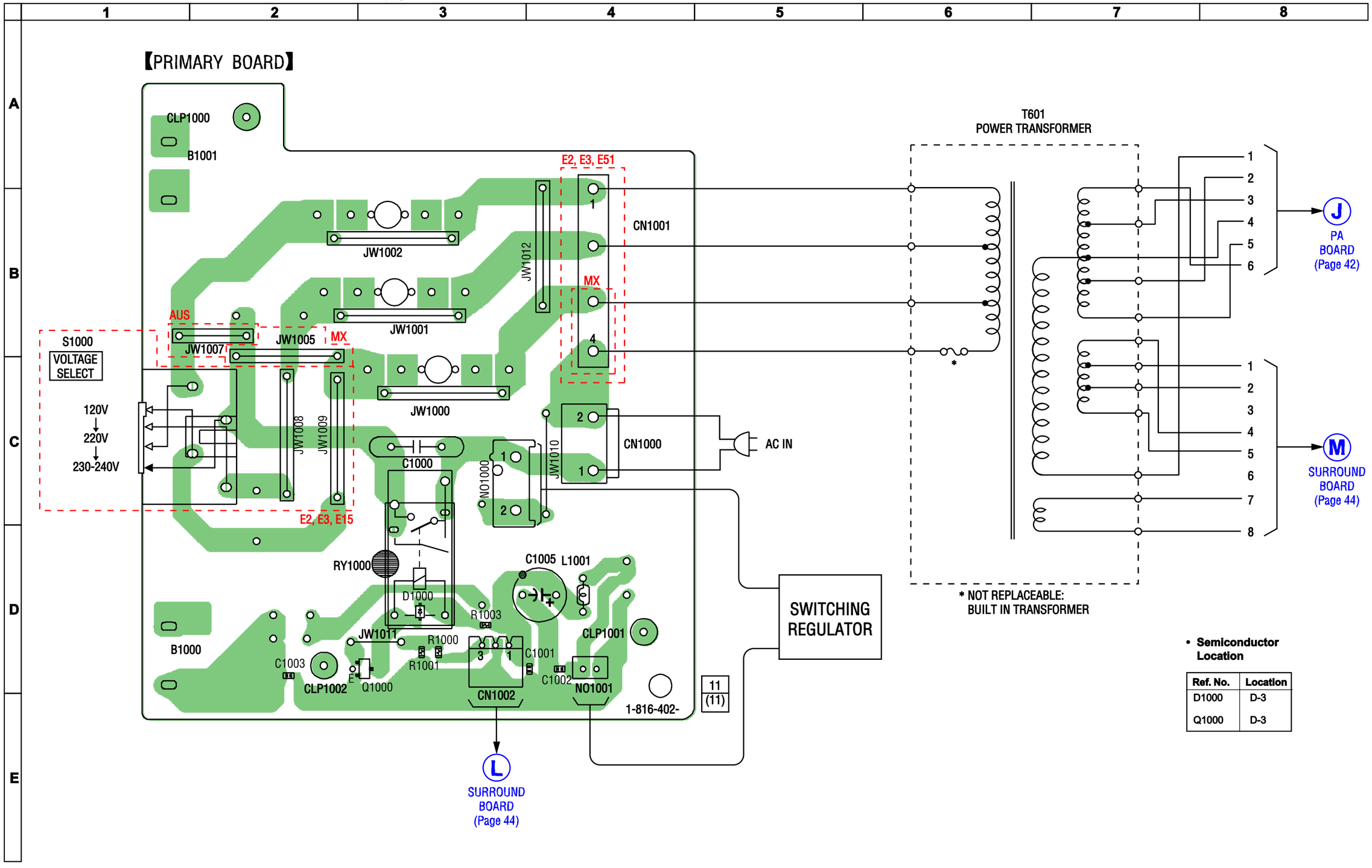
• See page 26 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D903	C-4	IC901	B-6
D904	D-2	IC902	C-9
D905	A-4	IC903	C-8
D906	D-8		
D907	E-8	Q901	B-9
D908	E-8	Q904	D-9
D909	F-8	Q905	D-9
D910	F-8	Q906	D-9
D911	E-2	Q907	D-9
D914	F-6	Q908	D-8
D915	F-5	Q909	F-8
D916	E-5	Q910	G-8
D917	E-5	Q911	F-7
D918	D-6	Q912	E-7
D919	D-6	Q913	E-6
D920	D-7	Q914	E-5
D921	E-7	Q915	E-5
D922	E-7	Q916	E-5
D923	F-7		
D924	F-6		

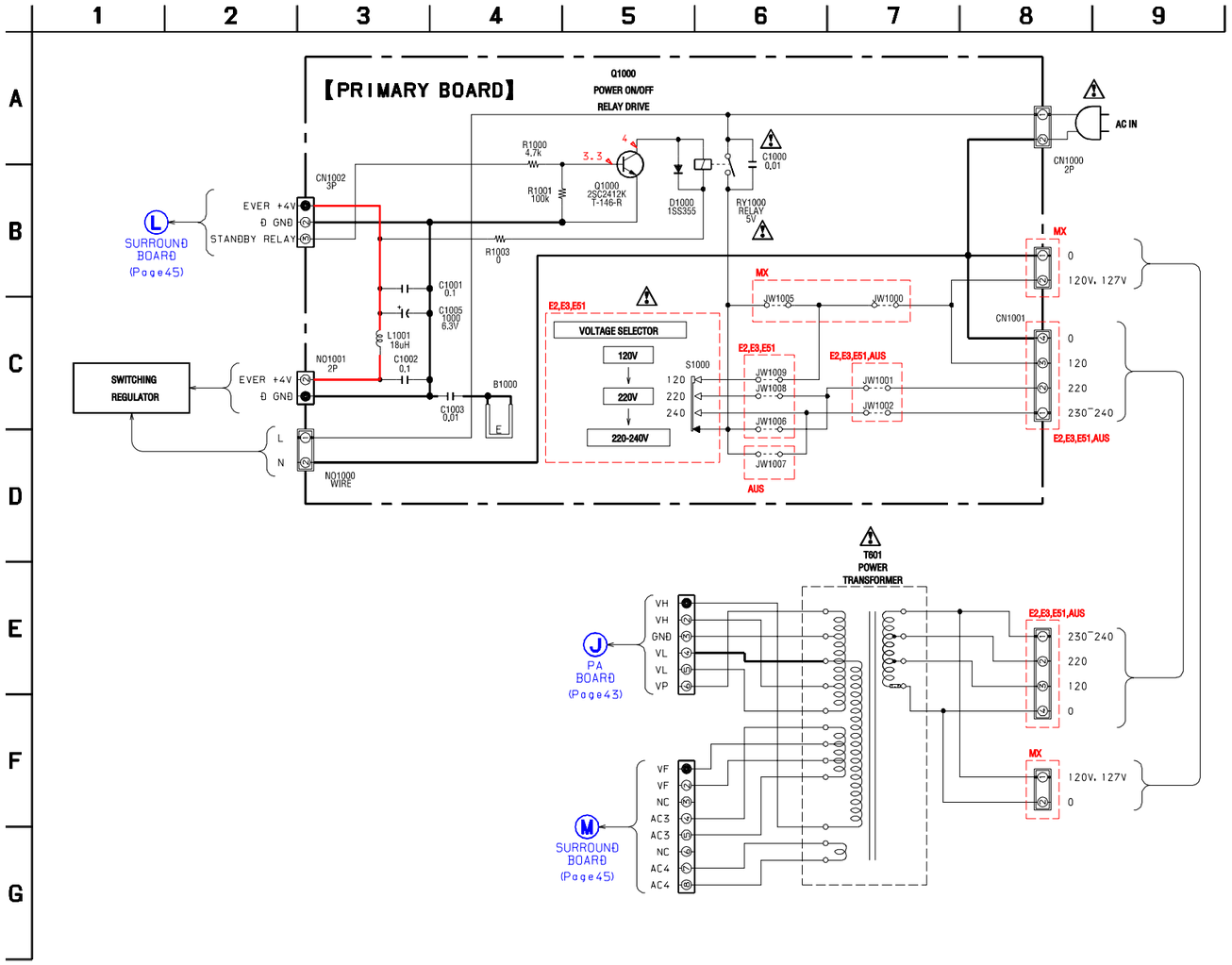
7-23. PRINTED WIRING BOARD – PRIMARY BOARD – • See page 26 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D1000	D-3
Q1000	D-3

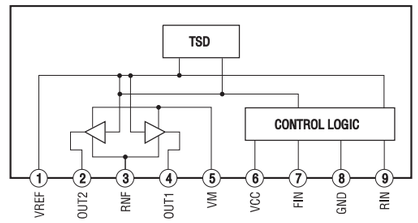
7-24. SCHEMATIC DIAGRAM – PRIMARY BOARD –



7-25. IC Block Diagram

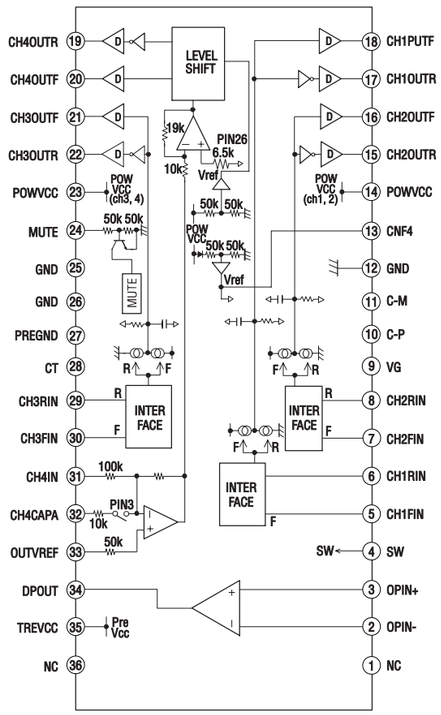
– DRIVER Board –

IC701, 712 BA6956AN



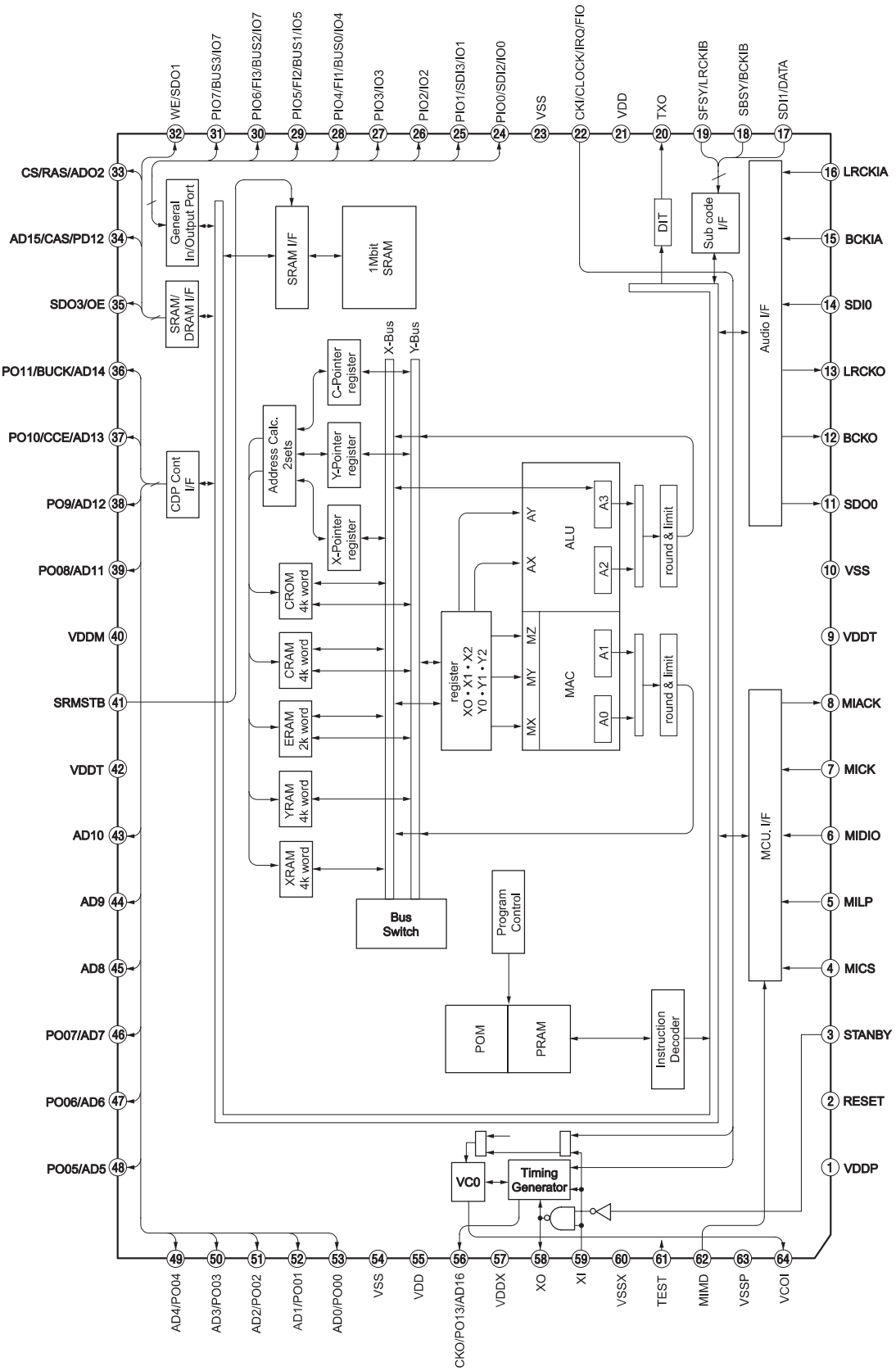
– BD Board –

IC251 BA5947FM



– BD Board –

IC301 TC94A34FG-002



7-26. IC Pin Function Descriptions

• IC101 CXD3059AR (RF AMP) (BD BOARD)

Pin No.	Pin Name	I/O	Description
1	MIRR	I/O	Mirror signal input/output(Not used)
2	DFCT	I/O	Defect signal input/output (Not used)
3	FOK	I/O	Focus OK signal input/output (Not used)
4	VSS	—	Internal digital ground
5	LOCK	I/O	Not used
6	MDP	O	Spindle motor servo control output
7	SSTP	I	Disk innermost detection signal input
8	IOVSS1	—	I/O digital ground
9	SFDR	O	Sled drive output
10	SFDR	O	Sled drive output
11	TFDR	O	Tracking drive output
12	TRDR	O	Tracking drive output
13	FFDR	O	Focus drive output
14	FFDR	O	Focus drive output
15	IOVDD1	—	I/O digital power supply
16	AVDD0	—	Analog power supply
17	AVSS0	—	Analog ground
18	NC	—	Not used
19	E	I	E signal input
20	F	I	F signal input
21	TEI	I	Tracking error signal input
22	TEO	O	Tracking error signal output
23	FEI	I	Focus error signal input
24	FEO	O	Focus error signal output
25	VC	I/O	Center voltage output from RF amplifier block
26	A	I	A signal input
27	B	I	B signal input
28	C	I	C signal input
29	D	I	D signal input A
30	NC	—	Not used
31	AVDD4	—	Analog power supply
32	RFDCO	O	RFDC signal output (Not used)
33	PDSENS	I	Reference voltage pin
34	AC_SUM	O	RFAC summing amplifier output
35	EQ_IN	I	Equalizer circuit input
36	LD	O	APC output
37	PD	I	APC input
38	NC	—	Not used
39	RFC	I	Equalizer cut-off frequency adjustment pin
40	AVSS4	—	Analog ground
41	RFACO	O	RFAC signal output
42	RFACI	I	RFAC signal input or EFM signal input
43	AVDD3	—	Analog power supply
44	BIAS	I	Asymmetry circuit constant current input
45	ASYI	I	Asymmetry comparator voltage input
46	ASYO	O	EFM full-swing output
47	VPCO	O	Not used
48	VCTL	I	Wide-band EFM PLL VCO2 control voltage input

Pin No.	Pin Name	I/O	Description
49	AVSS3	—	Analog ground
50	CLTV	I	Multiplier VCO1 control voltage input
51	FILO	O	Master PLL (slave = digital PLL) filter output
52	FILI	I	Master PLL filter input
53	PCO	O	Master PLL charge pump output
54	AVDD5	—	Analog power supply
55	DDVROUT	O	DC/DC converter output
56	DDVRSEN	I	DC/DC converter output voltage monitor input
57	AVSS5	—	Analog ground
58	DDCR	I	DC/DC converter reset input
59	NC	—	Not used
60	BCKI	I	D/A interface bit clock input
61	PCMDI	I	D/A interface serial data input (2's COMP, MSB first)
62	LRCKI	I	D/A interface LR clock input
63	LRCK	O	D/A interface LR clock output f = Fs
64	VSS	—	Internal digital ground
65	PCMD	O	D/A interface serial data output (2's COMP, MSB first)
66	BCK	O	D/A interface bit clock output
67	VDD	—	Internal digital power supply
68	EMPH	O	High when the playback disc has emphasis, low it has not
69	EMPHI	I	High when de-emphasis is ON, low when input OFF
70	IOVDD2	—	I/O digital power supply
71	DOUT	O	Digital Out output
72	TEST	I	Test pin Normally ground
73	TES1	I	Test pin Normally ground
74	IOVss2	—	I/O digital ground
75	NC	—	Not used
76	XVSS	—	Master clock ground
77	XTAO	O	Crystal oscillation circuit output
78	XTAI	I	Crystal oscillation circuit input
79	XVDD	—	Master clock power supply
80	AVDD1	—	Analog power supply
81	AOUT1	O	Lch analog output
82	VREFL	O	Lch reference voltage
83	AVSS1	—	Analog ground
84	AVSS2	—	Analog ground
85	VREFR	O	Rch reference voltage
86	AOUT2	O	Rch analog output
87	AVDD2	—	Analog power supply
88	NC	—	Not used
89	IOVDD0	—	I/O digital power supply
90	RMUT	O	Rch "0" detection flag (Not used)
91	LMUT	O	Lch "0" detection flag (Not used)
92	NC	—	Not used
93	XTSL	I	Crystal selection input (Not used)
94	IOVSS0	—	I/O digital ground
95	XTACN	I	Oscillation circuit control Self-oscillation when high, oscillation stop when low
96	SQSO	O	Subcode Q 80-bit and PCM peak and level data output (Not used)
97	SQCK	I	SQSO readout clock input

Pin No	Pin Name	I/O	Description
98	SBSO	O	Subcode P to W serial output (Not used)
99	EXCK	I	SBSO readout clock input (Not used)
100	XRST	I	System reset input
101	SYSM	I	Mute input
102	D ATA	I	Serial data input from CPU
103	VSS	—	Internal digital ground
104	XLAT	I	Latch input from CPU
105	CLOCK	I	Serial data transfer clock input from CPU
106	VDD	—	Sled drive output Internal digital power supply Tracking drive output
107	SENS	O	SENS output to CPU
108	SCLK	I	SENS serial data readout clock input
109	ATSK	I/O	Anti-shock input/output (Not used)
110	WFCK	O	WFCK output (Not used)
111	XUGF	O	XUGF output (Not used)
112	XPCK	O	XPCK output (Not used)
113	GFS	O	GFS output (Not used)
114	C2PO	O	C2PO output (Not used)
115	SCOR	O	High output when the subcode sync, S0 or S1, is detected
116	VDD	—	Internal digital power supply
117	C4M	O	4 2336MHz output (Not used)
118	WDCK	O	Word clock output f = 2Fs (Not used)
119	COUT	I/O	Track number count signal input/output (Not used)
120	NC	—	Not used

• **IC901 MB90M407PF-G-139-BNDE1 DISPLAY CONTROL (PANEL Board)**

Pin No.	Pin Name	I/O	Description
1 to 5	G5 to G1	O	FLD grid output
6 to 10	P1 to P5	O	FLD segment output
11	VSS-IO	—	Ground
12 to 22	P6 to P16	O	FLD segment output
23	VDD-FIP	—	Power supply (+3.3V)
24 to 41	P17 to P34	O	FLD segment output
42	VSS-IO	—	Ground
43 to 47	P35 to P39	O	FLD segment output
48	VKK	—	Power supply (-35V)
49	MD0	I	Not used (pull up with resistor)
50	MD1/VDD-VFT	I	Not used (pull up with resistor)
51	MD2	I	Not used (pull down with resistor)
52	VOLUME11,MULTI CH LED	O	LED drive signal output
53	VOLUME7,8 LED	O	LED drive signal output
54	VOLUME9,10 LED	O	LED drive signal output
55	VOLUME5,6 LED	O	LED drive signal output
56	VOLUME3,4 LED	O	LED drive signal output
57	VOLUME1,2 LED	O	LED drive signal output
58	CD/DVD,TUNER LED	O	LED drive signal output
59	TAPE A/B,MD/VIDEO LED	O	LED drive signal output
60	IIC-DATA	O	IIC serial data output
61	IIC-CLOCK	O	IIC clock signal output
62	AVCC	—	Power supply (+3.3V)
63	AVSS	—	Ground
64 to 66	KEY0 to KEY2	I	Key input (A/D)
67	ALL BAND	I	L+R signal input
68	SUPER LOW FREQUENCY (BPF 0)	I	Spectrum analyzer BPF signal input
69 to 71	BPF3 to BPF1	I	Spectrum analyzer BPF signal input
72	SELECTOR	O	LED group select signal output
73	GAME IN, REC/PAUSE LED	O	LED drive signal output
74, 75	JOG B, JOG A	I	JOG dial encoder signal B/A input
76	AMS	I	AMS dial signal input
77	RESET	I	Reset input
78	SOFT TEST	O	Not used (open)
79	VOL 1B	I	Volume encoder signal B input
80	VOL 1A	I	Volume encoder signal A input
81	VSS-CPU	—	Ground
82	XOUT	O	Crystal oscillator output (4MHz)
83	XIN	I	Crystal oscillator input (4MHz)
84	VCC-CPU	—	Power supply (+3.3V)
85 to 100	G21 to G6	O	FLD grid output

• **IC401 M3062CMEN-A03FPUO SYSTEM CONTOL (MAIN Board)**

Pin No.	Pin Name	I/O	Description
1	XRST	O	CD reset signal output
2	CD-DATA	O	CD data output
3	XLAT	O	CD latch signal output
4	SIRCS	I	SIRCS input
5	MP3 DATA OUT	O	Serial data output
6	MP3 DATA IN	I	Serial data input
7	MP3 CLK	O	Serial clock output
8	BYTE	I	Not used (connected to ground)
9	CNVSS	—	Not used (Connected to ground with resistor)
10	XC-IN	I	Sub clock input (32.768KHz)
11	XC-OUT	O	Sub clock output (32.768KHz)
12	RESET	I	System reset input
13	X-OUT	O	Main system clock output (16MHz)
14	VSS	—	Ground
15	X-IN	I	Main system clock input (16MHz)
16	VCC	—	Power supply (+5V)
17	NMI	I	Not used (Pull up with resistor)
18	CD-CLK	O	CD data clock output
19	SCOR	I	Subcode sync (S0+S1) detection signal input
20	AC-CUT	I	AC cut check signal input
21	SENS	I	SENS signal input from CXD3059AR
22	MP3 RST	O	MP3 reset signal output
23	MP3 CS	O	MP3 chip select signal output
24	MP3 LP	O	MP3 latch pules output
25	MP3 ACK	I	MP3 acknowledge signal input
26	MP3 REQ	I	Interrupt request signal input
27	FAN CTL	O	FAN moter control signal output
28	VIDEO OUT	O	Not used
29	IIC-CLK	I	IIC serial data clock input
30	IIC-DATA	I	IIC serial data input
31	SW-MUTE	O	Subwoofer mute signal output
32	REC MUTE	O	REC mute signal output
33	HP DETECT	I	Headphone detect input
34	LINE-MUTE	O	TA LINE mute signal output
35	MATRIX-SURR-1-LED	O	Subwoofer LED drive signal output
36	SW-LINE-LED	O	Subwoofer LED drive signal output
37	MATRIX-SURR-2-LED	O	Subwoofer LED drive signal output
38	SW-ON-LED/VIDEO MUTE	O	Subwoofer LED drive signal output
39	AMS MUTE	O	AMS mute signal output
40	CD/DVD-POWER	O	CD power on/off signal output
41	CD/DVD-MUTE	O	CD mute signal output
42	OPEN SW	I	Lever switch signal input
43	TBL-SENS	I	Table sensor signal input
44	E-3	I	Disc tray status detection signal input
45	E-2	I	Disc tray status detection signal input
46	E-1	I	Disc tray status detection signal input
47	TM-F	O	Table motor control signal output
48	TM-R	O	Table motor control signal output
49	LMF	O	Loading motor control signal output
50	LMR	O	Loading motor control signal output

Pin No.	Pin Name	I/O	Description
51	A-PLAY	I	TCM-A play switch input
52	A-TRIG	O	TCM-A trigger output
53	A-HALF	I	A deck half detection signal input
54	CAPM-CONT	O	Capstan motor REV/FWD/STOP control signal output
55	REC (FWD)	O	Record tab switch for SIDE A signal output
56	B-PLAY	I	TCM-B play switch input
57	B-TRIG	O	TCM-B Trigger output
58	REC (REV)	O	Record tab switch for SIDE B signal output
59	TC-RELAY	O	REC/PB selection signal output
60	REC BIAS	O	Bias on/off signal output
61	AMS-IN	I	AMS signal input
62	VCC	—	Power supply (+3.3V)
63	TC-MUTE	O	TC line mute signal output
64	VSS	—	Ground
65	AUDIO1-DATA	O	Serial data output to Audio EQIC
66	AUDIO1-CLK	O	Serial data clock output to Audio EQIC
67	AUDIO2-DATA	O	Serial data output to Audio EQIC
68	AUDIO2-CLK	O	Serial data clock output to Audio EQIC
69	AC-CUT-MAIN	I	AC cut check signal input
70	STBY-RELEY	O	Reley drive signal output
71	CTR-RLY	O	Not used
72	REAR SW-RELAY	O	Subwoofer relay control signal output
73	DISPLAY-KEY	I	DISPLAY key signal input
74	POWER-KEY	I	Power key signal input
75	GC-RESET	O	GC reset signal output
76	STBY-LED	O	Standby LED drive signal output
77	LINK-RLY	O	Surround speaker relay driver signal output
78	FR-RELAY	O	Front speaker relay driver signal output
79	$\overline{\text{HP-MUTE}}$	O	Headphone mute signal output
80	STK-MUTE	O	Mute signal output to power IC
81	$\overline{\text{PROT}}$	I	Speaker protection signal input
82	ST-CLK	O	Tuner clock signal output
83	ST-DIN	I	Tuner data input
84	ST-DOUT	O	Tuner data output
85	ST-CE	O	Tuner chip enable signal output
86	$\overline{\text{TUNED}}$	I	Tuned signal input
87	$\overline{\text{STEREO}}$	I	Stereo signal input
88	ST-MUTE	O	Tuner mute signal output
89	A-PHOTO OUT	I	TCM-A reel pulse input
90	B-PHOTO OUT	I	TCM-B reel pulse input
91	B-HALF	I	B deck half detection input
92	MODEL-IN	I	Model input
93	DEST-IN	I	Destination input
94	$\overline{\text{THER MAL VACS IN}}$	I	VACS signal input
95	DVD-PWR-CHK/SW A0 KEY	I	Subwoofer ON/OFF and SURROUND SPEAKER MODE key input
96	AVSS	—	Ground
97	FUSELESS SW	I	Over-voltage protection detection input termnal
98	VREF	I	Reference voltage input
99	AVCC	—	Power supply (+3.3V)
100	XTCN/MIC DET	O	Oscillation circuit control signal output

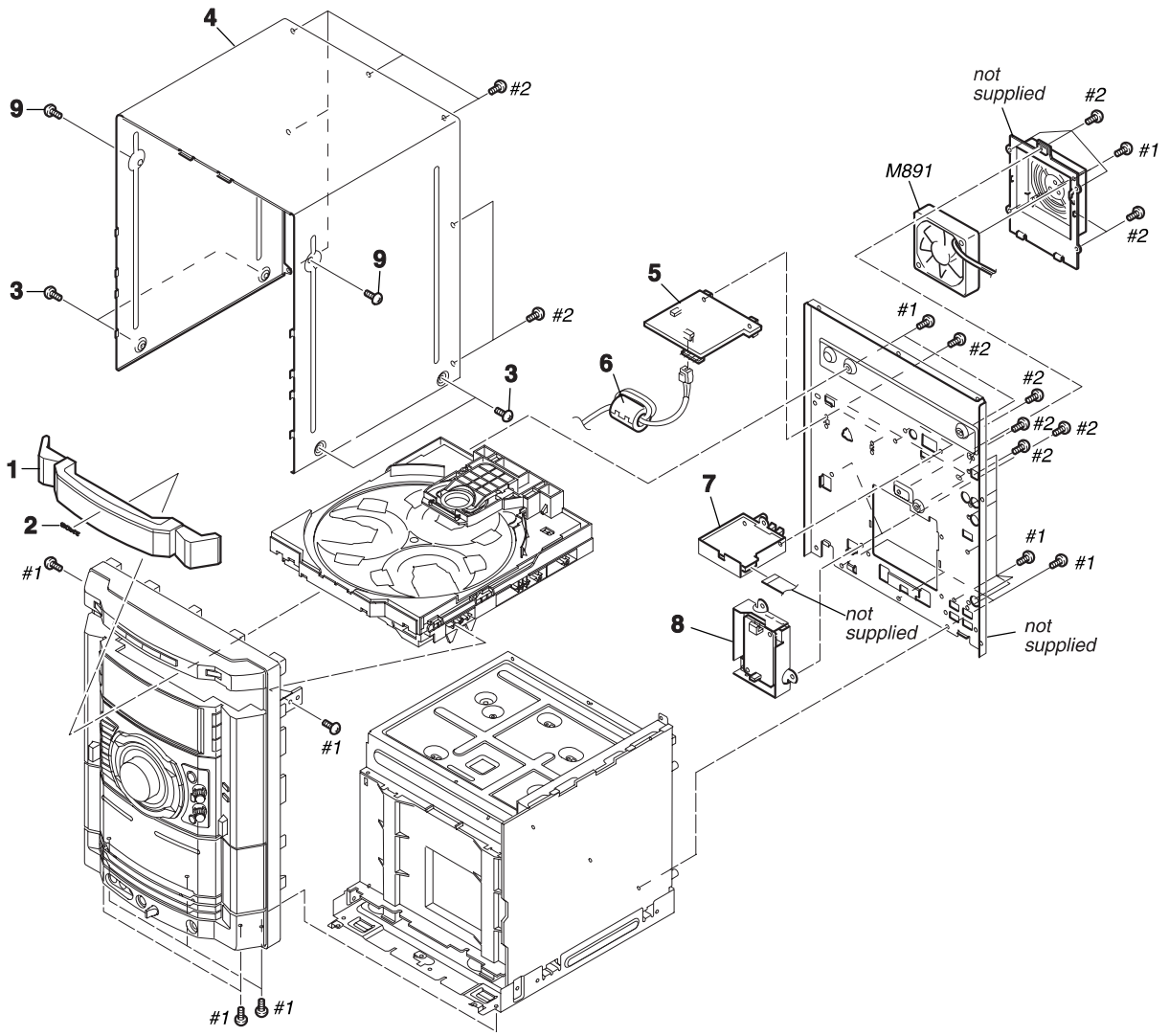
SECTION 8
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories are given in the last of this parts list.
- Abbreviation
  AUS : Australian model
  E2 : 120V AC Area in E model
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  MX : Mexican model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

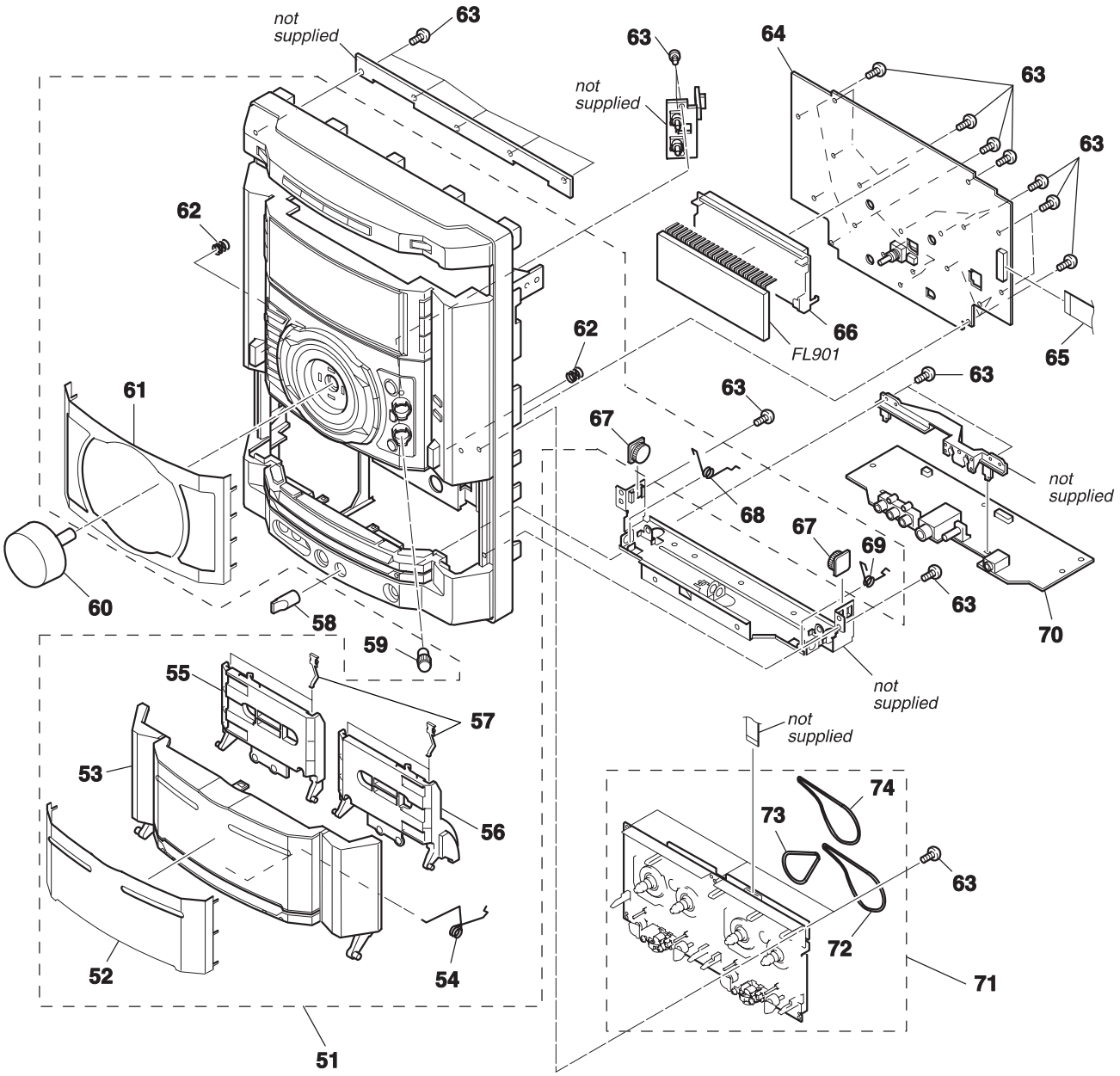
8-1. CASE, REAR PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	X-4956-227-1	LOADING PANEL ASSY	
2	4-963-404-21	EMBLEM (5-A), SONY	
3	3-363-099-02	SCREW (CASE 3 TP2) (M3x8)	
4	4-231-828-71	CASE	
5	A-4750-964-A	PRIMARY BOARD, COMPLETE (E2, E3, E51)	
5	A-4753-137-A	PRIMARY BOARD, COMPLETE (MX)	
5	A-4753-146-A	PRIMARY BOARD, COMPLETE (AUS)	

Ref. No.	Part No.	Description	Remarks
6	1-500-497-11	FILTER, CLAMP (FERRITE CORE)	
7	1-693-603-11	TUNER (FM/AM)	
⚠8	1-468-737-21	POWER, SWITCHING	
9	3-363-099-32	SCREW (CASE 3 TP2) (M3 x12)	
M891	1-787-099-21	FAN, DC	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3 (E2)	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

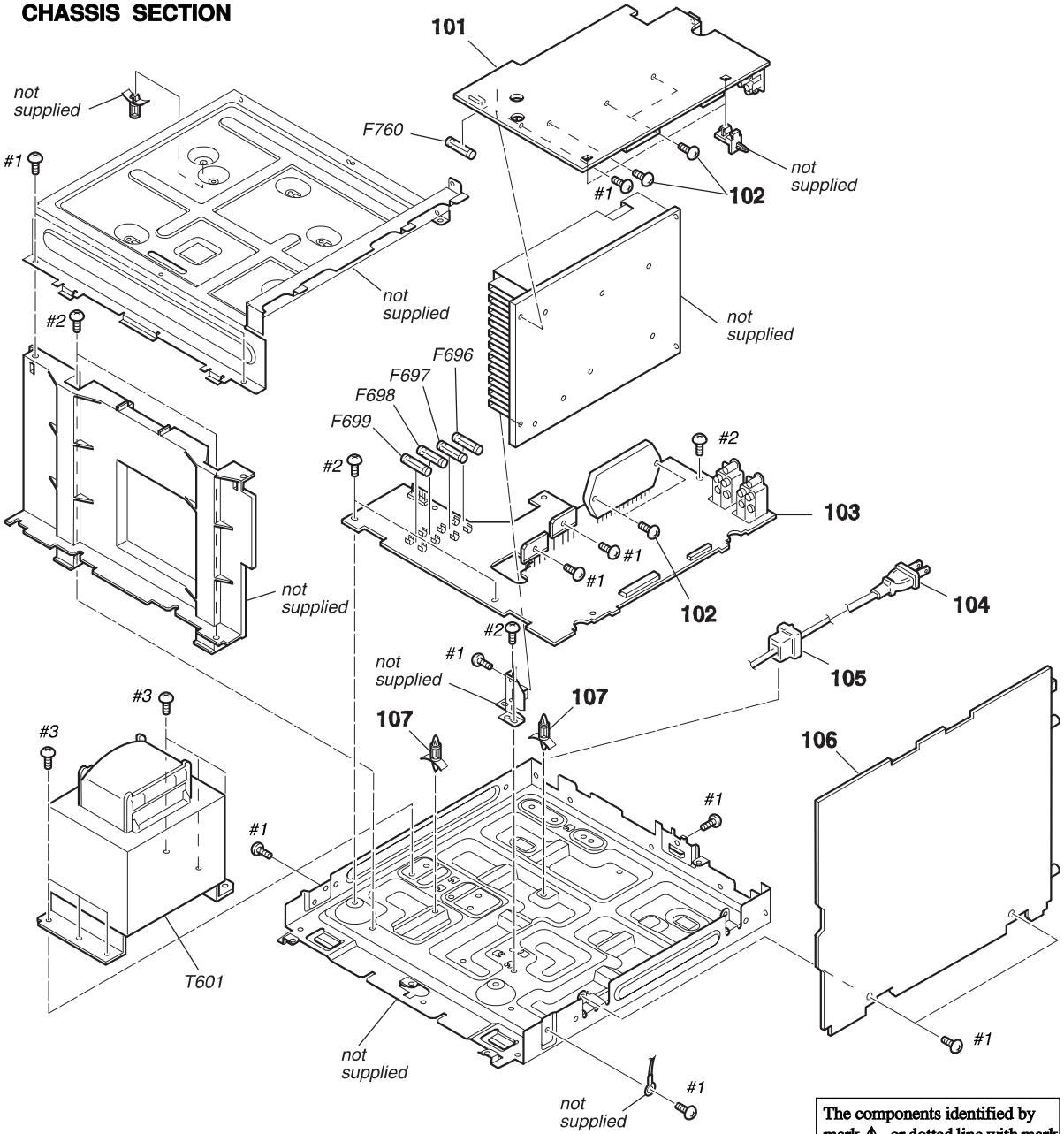
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	X-4956-225-1	FRONT PANEL ASSY	
52	4-252-592-01	COVER AL-TC	
53	4-252-577-01	LID TC	
54	4-252-595-01	SPRING LID	
55	4-252-578-01	HOLDER TC-L	
56	4-252-579-01	HOLDER TC-R	
57	4-959-229-11	DETENT, CASSETTE	
58	4-224-578-21	KNOB (MIC)	
59	4-252-571-01	KNOB AMS	
60	4-252-575-01	KNOB VOL	
61	4-252-590-11	COVER AL-STR	
62	4-244-092-01	SPRING (EJECT)	
63	4-951-620-01	SCREW (2.6X8), +BVTP	
64	A-1056-930-A	PANEL BOARD, COMPLETE (MX)	

Ref. No.	Part No.	Description	Remarks
64	A-4750-973-A	PANEL BOARD, COMPLETE (E2, E3, E51, AUS)	
65	1-773-109-11	WIRE (FLAT TYPE) (19 CORE)	
66	4-231-581-01	HOLDER (FL)	
67	4-224-104-11	DAMPER	
68	4-252-597-01	SPRING L	
69	4-252-598-01	SPRING R	
70	A-4750-976-A	GAME BOARD, COMPLETE	
71	1-796-487-61	DECK, MECHANICAL	
72	4-243-608-01	BELT (BR)	
73	4-243-609-01	BELT (AF)	
74	4-243-610-01	BELT (AL)	
FL901	1-518-981-11	VACUUM FLUORESCENT DISPLAY	

8-3. CHASSIS SECTION

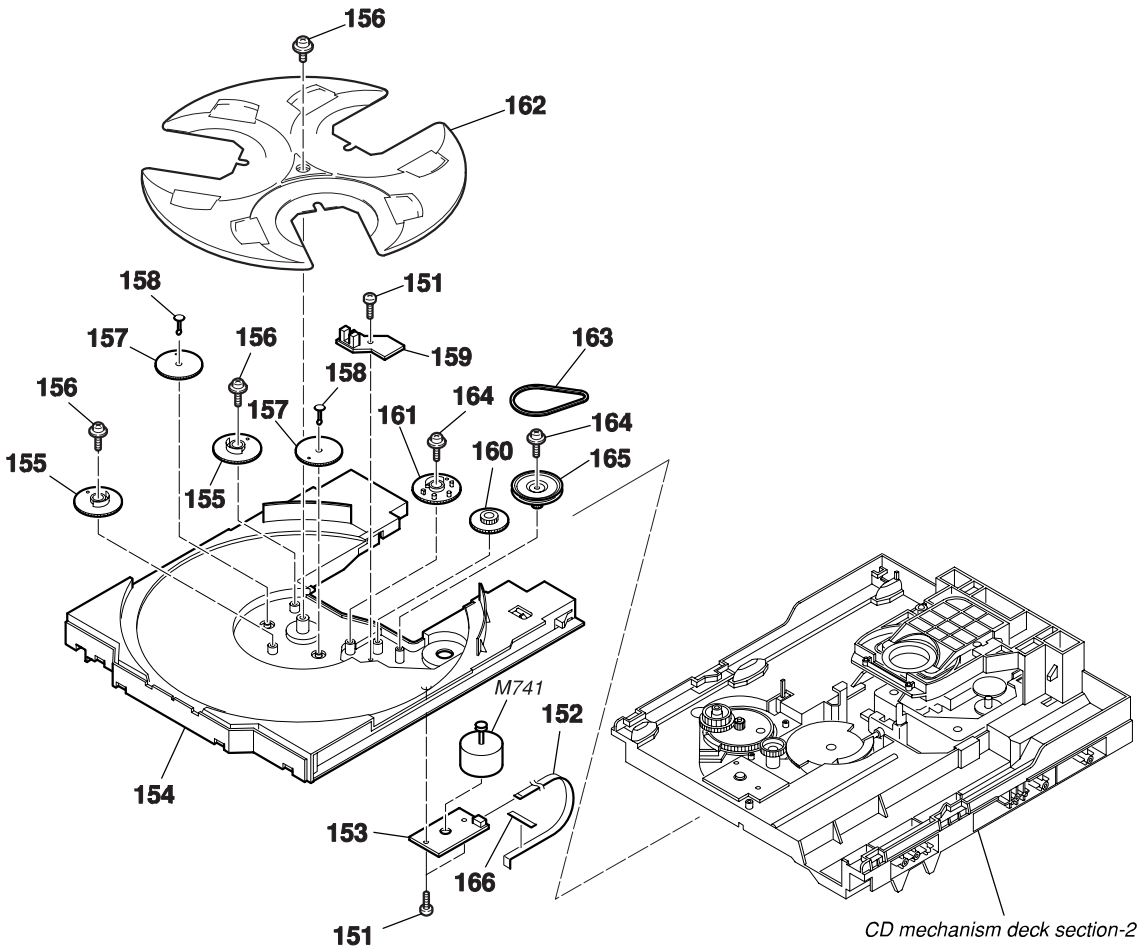


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
101	A-1053-567-A	SURROUND BOARD, COMPLETE (MX)	
101	A-4751-013-A	SURROUND BOARD, COMPLETE (E2, E3, E51)	
101	A-4753-163-A	SURROUND BOARD, COMPLETE (AUS)	
102	3-905-609-31	SCREW (TRANSISTOR)	
103	A-1055-329-A	PA BOARD, COMPLETE (E3)	
103	A-4751-012-A	PA BOARD, COMPLETE (E2, E51, MX)	
103	A-4753-161-A	PA BOARD, COMPLETE (AUS)	
⚠104	1-777-071-53	CORD, POWER (E51)	
⚠104	1-827-226-11	CORD, POWER (E2, E3, MX)	
⚠104	1-827-295-22	CORD, POWER (AUS)	
* 105	3-703-244-00	BUSHING (2104), CORD (E51, AUS)	
105	3-703-571-11	BUSHING (S) (4516), CORD (E2, E3, MX)	
106	A-4751-003-A	MAIN BOARD, COMPLETE (E2)	
106	A-4753-142-A	MAIN BOARD, COMPLETE (E3)	
106	A-4753-148-A	MAIN BOARD, COMPLETE (AUS)	

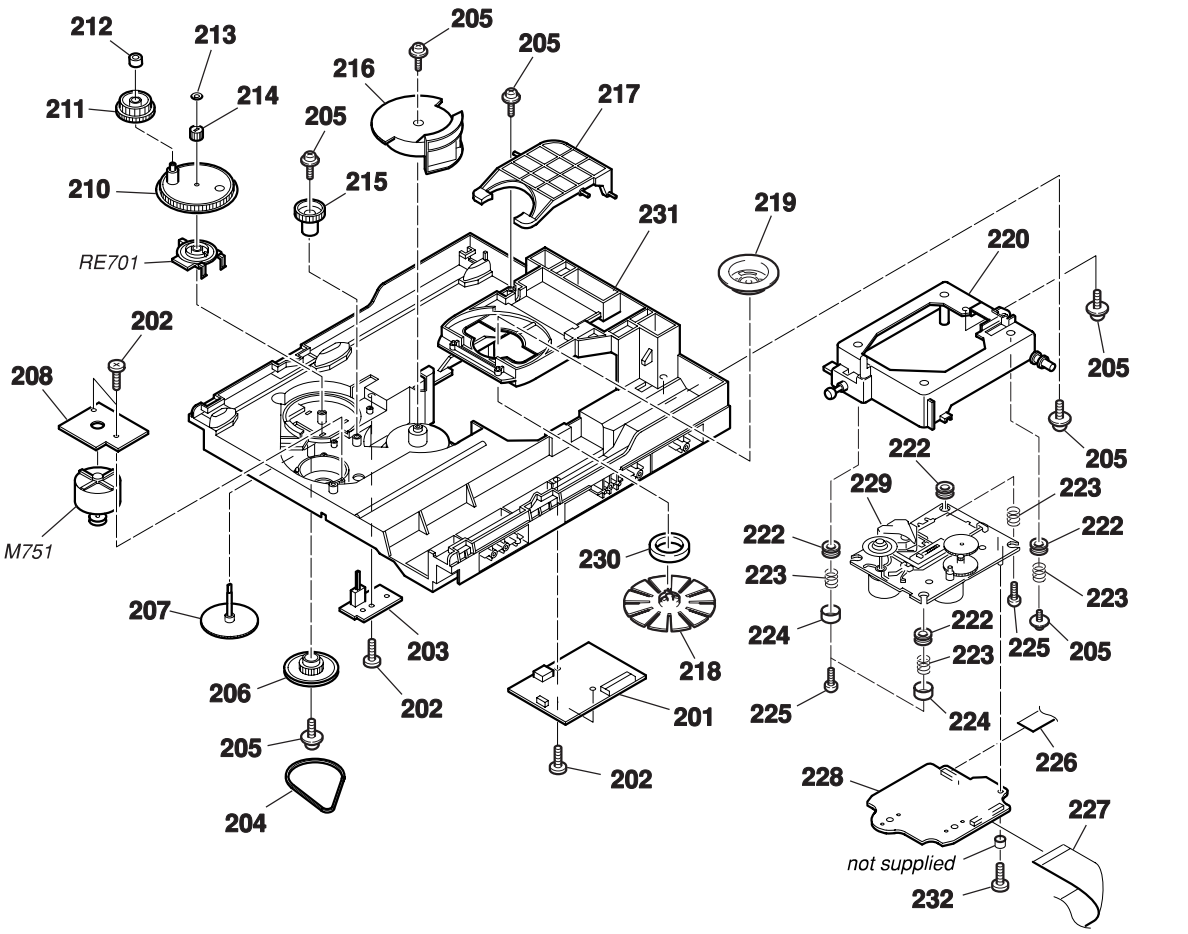
Ref. No.	Part No.	Description	Remarks
106	A-4753-153-A	MAIN BOARD, COMPLETE (E51)	
106	A-4753-156-A	MAIN BOARD, COMPLETE (MX)	
107	4-924-098-01	HOLDER, PC BOARD	
⚠F696	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	
⚠F697	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)	
⚠F698	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (6.3A/250V)	
⚠F699	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (6.3A/250V)	
⚠F760	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)	
⚠T601	1-443-202-11	POWER TRANSFORMER (E2, E3, E51, AUS)	
⚠T601	1-443-202-21	POWER TRANSFORMER (MX)	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-881-09	SCREW +BVTT 4X8 (S)	

8-4. CD MECHANISM DECK SECTION-1 (CDM74-F1BD81)



Ref. No.	Part No.	Description	Remarks
151	4-218-253-32	SCREW (M2.6), +BTTP	
152	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)	
153	1-687-134-12	MOTOR (TB) BOARD	
154	4-243-815-01	TABLE (LOADING)	
155	4-245-571-02	GEAR (STOPPER)	
156	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING	
157	4-245-570-01	GEAR (JOINT)	
158	4-245-572-01	BUSHING (GEAR)	
159	1-687-132-12	SENSOR BOARD	
160	4-243-820-01	GEAR (TABLE)	
161	4-243-819-01	GEAR (GENEVA)	
162	4-243-816-01	TRAY	
163	4-243-823-01	BELT (TABLE)	
164	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
165	4-243-821-01	PULLEY (TABLE)	
166	3-231-598-01	SHEET (BA)	
M741	A-4723-963-A	MOTOR ASSY, TABLE	

8-5. CD MECHANISM DECK SECTION-2 (CDM74-F1BD81)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
201	1-678-135-12	DRIVER BOARD	
202	4-218-253-32	SCREW (M2.6), +BTTP	
203	1-687-669-12	SW BOARD	
204	4-244-034-01	BELT (LOADING)	
205	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING	
206	4-225-844-01	GEAR (LOADING A)	
207	4-224-613-01	GEAR (SHAFT)	
208	1-687-133-12	MOTOR (LD) BOARD	
210	4-244-108-01	GEAR, SWING	
211	4-224-609-01	GEAR (LOADING C)	
212	4-224-608-01	COLLAR, SWING	
213	3-016-533-01	WASHER (FR), STOPPER	
214	4-224-611-01	GEAR (LOADING B)	
215	4-224-606-01	GEAR (RV)	
216	4-243-818-01	GEAR (U/D)	
217	4-243-822-02	LEVER (LIFTER)	

Ref. No.	Part No.	Description	Remarks
218	X-4955-774-1	PULLEY (SM) ASSY, CHUCKING	
219	4-221-688-01	PULLEY (B), CHUCKING	
220	X-4955-536-1	HOLDER (213) ASSY	
222	4-227-549-11	INSULATOR	
223	4-227-045-11	SPRING (INSULATOR), COIL	
224	4-231-151-01	STOPPER (BU)	
225	4-218-253-22	SCREW (M2.6), +BTTP	
226	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
227	1-775-248-11	WIRE (FLAT TYPE) (27 CORE)	
228	A-4751-045-A	BD BOARD, COMPLETE	
⚠229	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)	
230	1-471-035-11	MAGNET ASSY	
231	4-243-817-01	CHASSIS	
232	4-951-620-01	SCREW (2.6X8), +BVTP	
M751	A-4737-553-A	MOTOR ASSY, LOADING	
RE701	1-477-680-12	ENCODER, ROTARY	

SECTION 9
ELECTRICAL PARTS LIST

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  AUS : Australian model
  E2 : 120V AC Area in E model
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  MX : Mexican model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remarks
	A-4751-045-A	BD BOARD, COMPLETE **********			
		< CAPACITOR >			
C10	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C11	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C14	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C15	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C16	1-115-156-11	CERAMIC CHIP	1uF		10V
C17	1-126-246-11	ELECT CHIP	220uF	20%	4V
C18	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C111	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C112	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C113	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C114	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C115	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-128-995-21	ELECT CHIP	100uF	20%	10V
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C132	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C134	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C141	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C142	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C151	1-128-995-21	ELECT CHIP	100uF	20%	10V
C161	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C171	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C172	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C174	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C181	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C182	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C184	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C186	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C195	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C203	1-128-995-21	ELECT CHIP	100uF	20%	10V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C211	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C212	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C213	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C251	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C252	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C255	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C258	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C260	1-128-394-11	ELECT CHIP	220uF	20%	10V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C305	1-126-246-11	ELECT CHIP	220uF	20%	4V
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-126-208-21	ELECT CHIP	47uF	20%	4V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C313	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C314	1-126-208-21	ELECT CHIP	47uF	20%	4V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN101	1-770-425-11	CONNECTOR, FFC/FPC 16P			
CN201	1-818-350-11	CONNECTOR (FFC) 27P			
		< FERRITE BEAD >			
FB301	1-500-445-21	FERRITE, EMI (SMD) (2012)			

HCD-GN880

BD **CD SW** **DRIVER**

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC101	8-752-425-12	IC CXD3059AR			
IC251	6-705-808-01	IC BA5947FM			
IC301	6-705-365-01	IC TC94A34FG-002			
IC303	6-705-807-01	IC BH15FB1WG			
		< TRANSISTOR >			
Q10	6-550-363-01	TRANSISTOR 2SB1690KT146			
		< RESISTOR >			
R10	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R11	1-216-864-11	SHORT CHIP	0		
R12	1-216-845-11	METAL CHIP	100K	5%	1/10W
R13	1-218-446-11	METAL CHIP	1	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-835-11	METAL CHIP	15K	5%	1/10W
R113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R114	1-216-835-11	METAL CHIP	15K	5%	1/10W
R121	1-216-835-11	METAL CHIP	15K	5%	1/10W
R131	1-216-857-11	METAL CHIP	1M	5%	1/10W
R132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R133	1-216-848-11	METAL CHIP	180K	5%	1/10W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R143	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R151	1-216-864-11	SHORT CHIP	0		
R161	1-216-809-11	METAL CHIP	100	5%	1/10W
R162	1-216-841-11	METAL CHIP	47K	5%	1/10W
R163	1-216-809-11	METAL CHIP	100	5%	1/10W
R165	1-216-864-11	SHORT CHIP	0		
R171	1-216-817-11	METAL CHIP	470	5%	1/10W
R172	1-216-857-11	METAL CHIP	1M	5%	1/10W
R173	1-216-295-91	SHORT CHIP	0		
R181	1-216-809-11	METAL CHIP	100	5%	1/10W
R182	1-216-809-11	METAL CHIP	100	5%	1/10W
R191	1-216-864-11	SHORT CHIP	0		
R201	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R203	1-216-864-11	SHORT CHIP	0		
R204	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R205	1-216-864-11	SHORT CHIP	0		
R251	1-216-833-11	METAL CHIP	10K	5%	1/10W
R252	1-216-837-11	METAL CHIP	22K	5%	1/10W
R253	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R303	1-216-845-11	METAL CHIP	100K	5%	1/10W
R305	1-216-845-11	METAL CHIP	100K	5%	1/10W
R306	1-216-864-11	SHORT CHIP	0		
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-813-11	METAL CHIP	220	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R410	1-216-809-11	METAL CHIP	100	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
		< SWITCH >			
S101	1-771-853-11	SWITCH, DETECTION (LIMIT)			
		< VIBRATOR >			
X171	1-767-408-21	VIBRATOR, CRYSTAL (16.9MHz)			
**********					
		CD SW BOARD			
		**********			
		< DIODE >			
D925	8-719-058-04	DIODE SEL5223S-TP15 (I/⏻)			
		< TRANSISTOR >			
Q917	8-729-027-43	TRANSISTOR DTC114EKA-T146			
		< RESISTOR >			
R967	1-216-833-11	METAL CHIP	10K	5%	1/10W
R968	1-216-835-11	METAL CHIP	15K	5%	1/10W
R969	1-216-837-11	METAL CHIP	22K	5%	1/10W
R970	1-216-839-11	METAL CHIP	33K	5%	1/10W
R971	1-216-843-11	METAL CHIP	68K	5%	1/10W
R972	1-216-814-11	METAL CHIP	270	5%	1/10W
R973	1-216-819-11	METAL CHIP	680	5%	1/10W
R974	1-216-819-11	METAL CHIP	680	5%	1/10W
		< SWITCH >			
S918	1-762-875-21	SWITCH, KEYBOARD (⏏ OPEN/CLOSE)			
S919	1-762-875-21	SWITCH, KEYBOARD (EX-CHANGE/DISC SKIP)			
S920	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S921	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S922	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S923	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
**********					
	1-687-135-12	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C715	1-126-933-11	ELECT	100uF	20%	16V
C731	1-126-964-11	ELECT	10uF	20%	50V
C735	1-164-159-11	CERAMIC	0.1uF		50V
C736	1-164-159-11	CERAMIC	0.1uF		50V
C737	1-164-159-11	CERAMIC	0.1uF		50V
C741	1-162-306-11	CERAMIC	0.01uF	20%	16V
C751	1-162-306-11	CERAMIC	0.01uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C752	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN701	1-785-338-11	PIN, CONNECTOR (LIGHT ANGLE) 12P			
CN702	1-784-766-11	CONNECTOR, FFC 5P			
* CN703	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN704	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
		< DIODE >			
D701	8-719-947-16	DIODE MTZJ-T-72-5.1A			
D711	8-719-983-66	DIODE MTZJ-T-72-3.6B			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
IC712	8-759-598-69	IC BA6956AN			
		< TRANSISTOR >			
Q731	8-729-029-66	TRANSISTOR DTC114ESA			
		< RESISTOR >			
R701	1-249-413-11	CARBON	470	5%	1/4W
R702	1-247-807-31	CARBON	100	5%	1/4W
R711	1-247-831-91	CARBON	1K	5%	1/4W
R712	1-247-847-91	CARBON	4.7K	5%	1/4W
R713	1-247-863-91	CARBON	22K	5%	1/4W
R721	1-247-847-91	CARBON	4.7K	5%	1/4W
R722	1-247-847-91	CARBON	4.7K	5%	1/4W
R723	1-247-847-91	CARBON	4.7K	5%	1/4W
R731	1-247-807-31	CARBON	100	5%	1/4W
R732	1-249-429-11	CARBON	10K	5%	1/4W
R733	1-247-831-91	CARBON	1K	5%	1/4W
R734	1-249-430-11	CARBON	12K	5%	1/4W
R735	1-247-807-31	CARBON	100	5%	1/4W
R751	1-247-847-91	CARBON	4.7K	5%	1/4W
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	A-4750-976-A	GAME BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C801	1-126-176-11	ELECT	220uF	20%	10V
C802	1-124-464-11	ELECT	0.22uF	20%	50V
C803	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C804	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C805	1-124-261-00	ELECT	10uF	20%	50V
C806	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C807	1-124-257-00	ELECT	2.2uF	20%	50V
C809	1-124-250-11	ELECT	0.15uF	20%	50V
C810	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C811	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C812	1-124-261-00	ELECT	10uF	20%	50V
C813	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C814	1-124-261-00	ELECT	10uF	20%	50V
C816	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C817	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C838	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C839	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C840	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C841	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C842	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C845	1-124-261-00	ELECT	10uF	20%	50V
C846	1-124-261-00	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN801	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P			
CN802	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
		< DIODE >			
D802	8-719-988-61	DIODE 1SS355TE-17			
D803	8-719-988-61	DIODE 1SS355TE-17			
D806	8-719-988-61	DIODE 1SS355TE-17			
D807	8-719-988-61	DIODE 1SS355TE-17			
		< EARTH TERMINAL >			
EPT802	1-537-738-21	TERMINAL, GROUND			
EPT803	1-537-738-21	TERMINAL, GROUND			
EPT804	1-537-738-21	TERMINAL, GROUND			
		< IC >			
IC850	8-759-710-97	IC NJM4565M-D			
		< JACK >			
J801	1-817-629-11	JACK (LARGE TYPE) (MIC)			
J850	1-764-592-11	JACK 3P (GAME INPUT)			
J851	1-794-702-11	JACK, HEADPHONE (PHONSE)			
		< SHORT >			
JR803	1-216-864-11	SHORT CHIP	0		
JR810	1-216-864-11	SHORT CHIP	0		
JR811	1-216-864-11	SHORT CHIP	0		
JR812	1-216-864-11	SHORT CHIP	0		
JR813	1-216-864-11	SHORT CHIP	0		
		< RESISTOR >			
R801	1-216-845-11	METAL CHIP	100K	5%	1/10W
R802	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R803	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R804	1-216-809-11	METAL CHIP	100	5%	1/10W
R805	1-216-848-11	METAL CHIP	180K	5%	1/10W
R806	1-216-833-11	METAL CHIP	10K	5%	1/10W
R807	1-216-809-11	METAL CHIP	100	5%	1/10W
R808	1-216-837-11	METAL CHIP	22K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W
R810	1-216-845-11	METAL CHIP	100K	5%	1/10W
R811	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R813	1-216-821-11	METAL CHIP	1K	5%	1/10W
R814	1-216-833-11	METAL CHIP	10K	5%	1/10W
R827	1-216-845-11	METAL CHIP	100K	5%	1/10W
R828	1-216-845-11	METAL CHIP	100K	5%	1/10W
R829	1-216-821-11	METAL CHIP	1K	5%	1/10W
R830	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< VARIABLE RESISTOR >			
RV801	1-227-452-11	RES, VAR, CARBON		50K (MIC LEVEL)	
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JOG **MAIN**

Ref. No.	Part No.	Description			Remarks
		JOG BOARD			
		*********			
		< CAPACITOR >			
C964	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C965	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< SWITCH >			
S957	1-478-662-11	ENCODER, ROTARY (MULTI JOG)			
**********					
	A-4751-003-A	MAIN BOARD, COMPLETE (E2)			
	A-4753-142-A	MAIN BOARD, COMPLETE (E3)			
	A-4753-148-A	MAIN BOARD, COMPLETE (AUS)			
	A-4753-153-A	MAIN BOARD, COMPLETE (E51)			
	A-4753-156-A	MAIN BOARD, COMPLETE (MX)			
		**********			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			
		< CAPACITOR >			
C101	1-124-261-00	ELECT	10uF	20%	50V
C103	1-124-261-00	ELECT	10uF	20%	50V
C104	1-124-261-00	ELECT	10uF	20%	50V
C105	1-126-964-11	ELECT	10uF	20%	50V
C106	1-126-964-11	ELECT	10uF	20%	50V
C107	1-136-497-81	FILM	0.1uF	5%	50V
C108	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C109	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C110	1-126-964-11	ELECT	10uF	20%	50V
C111	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C112	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C113	1-126-964-11	ELECT	10uF	20%	50V
C114	1-136-170-00	FILM	0.27uF	5%	50V
C115	1-137-195-11	FILM	0.56uF	5%	50V
C116	1-126-963-11	ELECT	4.7uF	20%	50V
C119	1-124-589-11	ELECT	47uF	20%	16V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-126-160-11	ELECT	1uF	20%	50V
C122	1-124-261-00	ELECT	10uF	20%	50V
C123	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C124	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C125	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C126	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C127	1-126-947-11	ELECT	47uF	20%	35V
C128	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C130	1-104-658-91	ELECT	100uF	20%	10V
C131	1-126-959-11	ELECT	0.47uF	20%	50V
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C134	1-124-261-00	ELECT	10uF	20%	50V
C135	1-126-933-11	ELECT	100uF	20%	16V
C136	1-126-933-11	ELECT	100uF	20%	16V
C137	1-126-935-11	ELECT	470uF	20%	16V
C138	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C139	1-137-150-11	FILM	0.01uF	5%	100V
C140	1-126-947-11	ELECT	47uF	20%	35V
C141	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C142	1-130-481-00	MYLAR	0.0068uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C143	1-128-131-11	ELECT	22uF	20%	50V
C144	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C145	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C146	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C147	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C148	1-124-257-00	ELECT	2.2uF	20%	50V
C150	1-126-964-11	ELECT	10uF	20%	50V
C151	1-126-964-11	ELECT	10uF	20%	50V
C153	1-126-964-11	ELECT	10uF	20%	50V
C154	1-126-964-11	ELECT	10uF	20%	50V
C155	1-126-964-11	ELECT	10uF	20%	50V
C156	1-126-964-11	ELECT	10uF	20%	50V
C157	1-136-497-81	FILM	0.1uF	5%	50V
C158	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C160	1-126-964-11	ELECT	10uF	20%	50V
C161	1-100-436-91	CERAMIC CHIP	0.033uF	10%	25V
C162	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C163	1-126-964-11	ELECT	10uF	20%	50V
C164	1-136-170-00	FILM	0.27uF	5%	50V
C165	1-137-195-11	FILM	0.56uF	5%	50V
C166	1-126-963-11	ELECT	4.7uF	20%	50V
C169	1-126-947-11	ELECT	47uF	20%	35V
C170	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C171	1-126-960-11	ELECT	1uF	20%	50V
C172	1-126-964-11	ELECT	10uF	20%	50V
C173	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C174	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C175	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C176	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C177	1-137-194-81	FILM	0.47uF	5%	50V
C178	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C179	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C186	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C187	1-104-658-91	ELECT	100uF	20%	10V
C188	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C189	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C190	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C191	1-216-845-11	METAL CHIP	100K	5%	1/10W
C192	1-126-960-11	ELECT	1uF	20%	50V
C193	1-216-834-11	METAL CHIP	12K	5%	1/10W
C194	1-126-964-11	ELECT	10uF	20%	50V
C195	1-126-160-11	ELECT	1uF	20%	50V
C196	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C197	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C198	1-126-961-11	ELECT	2.2uF	20%	50V
C199	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C200	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C301	1-126-964-11	ELECT	10uF	20%	50V
C302	1-136-497-81	FILM	0.1uF	5%	50V
C303	1-136-497-81	FILM	0.1uF	5%	50V
C316	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C410	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C411	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C412	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C416	1-104-656-11	ELECT	2200uF	20%	6.3V
C419	1-162-923-11	CERAMIC CHIP	47PF	5%	50V

Ref. No.	Part No.	Description			Remarks
C421	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C429	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C430	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C462	1-104-658-91	ELECT	100uF	20%	10V
C464	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C469	1-126-157-11	ELECT	10uF	20%	16V (E2, E3, E51)
C497	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C498	1-126-964-11	ELECT	10uF	20%	50V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-128-548-11	ELECT	4700uF	20%	25V
C503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C504	1-126-926-11	ELECT	1000uF	20%	10V
C505	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C506	1-126-925-91	ELECT	470uF	20%	10V
C507	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C508	1-104-656-11	ELECT	2200uF	20%	6.3V
C517	1-125-827-91	CERAMIC CHIP	1uF	10%	25V
C518	1-125-827-91	CERAMIC CHIP	1uF	10%	25V
C520	1-126-961-11	ELECT	2.2uF	20%	50V
C521	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C523	1-126-964-11	ELECT	10uF	20%	50V
C525	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C526	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C531	1-164-156-11	CERAMIC CHIP	0.1uF		25V (AUS)
C532	1-164-156-11	CERAMIC CHIP	0.1uF		25V (AUS)
C532	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C533	1-104-658-91	ELECT	100uF	20%	10V
C534	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C535	1-126-928-11	ELECT	3300uF	20%	10V
C536	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C537	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C538	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C541	1-124-261-00	ELECT	10uF	20%	50V
C542	1-124-234-00	ELECT	22uF	20%	16V
C543	1-125-972-91	ELECT	100uF	20%	16V
C545	1-124-584-00	ELECT	100uF	20%	6.3V
C546	1-164-156-11	CERAMIC CHIP	0.1uF		25V (AUS)
C548	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C549	1-126-964-11	ELECT	10uF	20%	50V
C550	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C551	1-107-714-11	ELECT	10uF	20%	50V
C570	1-126-961-11	ELECT	2.2uF	20%	50V
C571	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C573	1-126-964-11	ELECT	10uF	20%	50V
C575	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C576	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C577	1-126-157-11	ELECT	10uF	20%	16V
C578	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C579	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C580	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C581	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C582	1-126-157-11	ELECT	10uF	20%	16V
C626	1-126-969-11	ELECT	220uF	20%	50V
C627	1-126-961-11	ELECT	2.2uF	20%	50V
C628	1-126-933-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description	Remarks
C629	1-164-156-11	CERAMIC CHIP 0.1uF	25V
		< CONNECTOR >	
CN501	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
CN502	1-573-843-11	CONNECTOR, BOARD TO BOARD 11P	
CN503	1-564-506-11	PLUG, CONNECTOR 3P	
CN504	1-816-304-11	SOCKET, DIN 9P (SYSTEM CONTROL)	
CN505	1-779-564-21	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	
CN506	1-569-906-11	SOCKET, CONNECTOR 11P	
CN507	1-785-338-11	PIN, CONNECTOR (LIGHT ANGLE) 12P	
* CN508	1-569-935-11	SOCKET, CONNECTOR 19P	
* CN509	1-569-930-11	SOCKET, CONNECTOR 13P	
* CN510	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	
CN512	1-785-336-11	PIN, CONNECTOR (LIGHT ANGLE) 10P	
CN513	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
CN514	1-766-715-21	CONNECTOR, BOARD TO BOARD 10P	
		< DIODE >	
D101	8-719-988-61	DIODE 1SS355TE-17	
D102	8-719-988-61	DIODE 1SS355TE-17	
D104	8-719-988-61	DIODE 1SS355TE-17	
D105	8-719-988-61	DIODE 1SS355TE-17	
D301	8-719-988-61	DIODE 1SS355TE-17	
D302	8-719-988-61	DIODE 1SS355TE-17	
D303	8-719-988-61	DIODE 1SS355TE-17	
D501	8-719-988-61	DIODE 1SS355TE-17	
D502	6-500-508-01	DIODE RR263M-400FTR	
D503	8-719-988-61	DIODE 1SS355TE-17	
D504	8-719-988-61	DIODE 1SS355TE-17	
D507	6-500-508-01	DIODE RR263M-400FTR	
D508	6-500-508-01	DIODE RR263M-400FTR	
D509	6-500-508-01	DIODE RR263M-400FTR	
D511	8-719-977-40	DIODE DTZ13B	
D627	8-719-988-61	DIODE 1SS355TE-17	
		< FERRITE BEAD >	
FB416	1-216-864-11	SHORT CHIP 0	
FB462	1-414-864-11	FERRITE, EMI (SMD) (1608)	
FB505	1-216-864-11	SHORT CHIP 0	
FB506	1-414-235-22	INDUCTOR, FERRITE BEAD	
FB507	1-414-235-22	INDUCTOR, FERRITE BEAD	
FB508	1-414-235-22	INDUCTOR, FERRITE BEAD	
FB509	1-414-235-22	INDUCTOR, FERRITE BEAD	
FB510	1-414-235-22	INDUCTOR, FERRITE BEAD	
FB511	1-414-235-22	INDUCTOR, FERRITE BEAD (E2, E3, E51, MX)	
FB511	1-500-284-21	INDUCTOR, FERRITE BEAD (AUS)	
FB512	1-500-284-21	INDUCTOR, FERRITE BEAD	
FB555	1-216-864-11	SHORT CHIP 0	
		< IC >	
IC101	6-705-667-01	IC M61537FP-RF0G	
IC301	6-705-809-01	IC BD4929G-TR	
IC401	6-803-975-01	IC M3062CMEN-A03FPU0	
IC502	8-759-394-36	IC BA09T	
IC503	6-703-550-01	IC TA7809LS	
IC504	6-702-771-01	IC TA78033LS	
IC508	6-600-012-01	IC TOTX141L (CD DIGITAL OUT)	

MAIN

Ref. No.	Part No.	Description	Remarks
IC627	6-703-610-01	IC RT8H015C-T112-1	
IC801	8-759-095-35	IC M5282FP-T1	
		< JACK >	
J501	1-770-272-11	JACK, PIN 2P (VIDEO/MD (AUDIO))	
J504	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	
		< SHORT >	
JR102	1-216-864-11	SHORT CHIP 0	
JR104	1-216-864-11	SHORT CHIP 0	
JR106	1-216-296-11	SHORT CHIP 0	
JR106	1-216-864-11	SHORT CHIP 0	
JR108	1-216-864-11	SHORT CHIP 0	
JR109	1-216-864-11	SHORT CHIP 0	
JR110	1-216-864-11	SHORT CHIP 0	
JR111	1-216-864-11	SHORT CHIP 0	
JR112	1-216-864-11	SHORT CHIP 0	
JR113	1-216-864-11	SHORT CHIP 0	
JR114	1-216-864-11	SHORT CHIP 0	
JR115	1-216-864-11	SHORT CHIP 0	
JR116	1-216-296-11	SHORT CHIP 0	
JR117	1-216-864-11	SHORT CHIP 0	
JR118	1-216-864-11	SHORT CHIP 0	
JR119	1-216-864-11	SHORT CHIP 0	
JR120	1-216-864-11	SHORT CHIP 0	
JR121	1-216-864-11	SHORT CHIP 0	
JR122	1-216-864-11	SHORT CHIP 0	
JR207	1-216-296-11	SHORT CHIP 0	
JR231	1-216-864-11	SHORT CHIP 0	
JR233	1-216-864-11	SHORT CHIP 0	
JR234	1-216-864-11	SHORT CHIP 0	
JR236	1-216-864-11	SHORT CHIP 0	
JR237	1-216-864-11	SHORT CHIP 0	
JR238	1-216-864-11	SHORT CHIP 0	
JR240	1-216-864-11	SHORT CHIP 0	
JR241	1-216-864-11	SHORT CHIP 0	
JR243	1-216-864-11	SHORT CHIP 0	
JR244	1-216-296-11	SHORT CHIP 0	
JR245	1-216-864-11	SHORT CHIP 0	
JR246	1-216-864-11	SHORT CHIP 0	
JR247	1-216-864-11	SHORT CHIP 0	
JR248	1-216-864-11	SHORT CHIP 0	
JR249	1-216-864-11	SHORT CHIP 0	
JR251	1-216-864-11	SHORT CHIP 0	
JR252	1-216-864-11	SHORT CHIP 0	
JR253	1-216-864-11	SHORT CHIP 0	
JR254	1-216-864-11	SHORT CHIP 0	
JR256	1-216-296-11	SHORT CHIP 0	
JR257	1-216-864-11	SHORT CHIP 0	
JR258	1-216-296-11	SHORT CHIP 0	
JR259	1-216-864-11	SHORT CHIP 0	
JR260	1-216-296-11	SHORT CHIP 0	
JR330	1-216-296-11	SHORT CHIP 0	
JR331	1-216-864-11	SHORT CHIP 0	
JR333	1-216-864-11	SHORT CHIP 0	
JR503	1-216-864-11	SHORT CHIP 0	
JR732	1-216-864-11	SHORT CHIP 0	
JR874	1-216-864-11	SHORT CHIP 0	
JR879	1-216-864-11	SHORT CHIP 0	
JR882	1-216-864-11	SHORT CHIP 0	
JR883	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L103	1-410-780-11	INDUCTOR 27mH	
L104	1-410-780-11	INDUCTOR 27mH	
L105	1-414-189-31	INDUCTOR 100uH	
		< TRANSISTOR >	
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-802-80	TRANSISTOR 2SC3661	
Q103	8-729-802-80	TRANSISTOR 2SC3661	
Q104	8-729-802-80	TRANSISTOR 2SC3661	
Q105	8-729-802-80	TRANSISTOR 2SC3661	
Q106	8-729-802-80	TRANSISTOR 2SC3661	
Q107	8-729-216-22	TRANSISTOR 2SA1162-G	
Q108	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q109	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q110	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q111	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q112	8-729-141-75	TRANSISTOR 2SD596DV345	
Q113	6-550-185-01	TRANSISTOR RT1P137P-TP-1	
Q114	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q115	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q116	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q117	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q118	8-729-903-46	TRANSISTOR 2SB1132-P	
Q119	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q120	8-729-903-46	TRANSISTOR 2SB1132-P	
Q121	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q122	8-729-903-46	TRANSISTOR 2SB1132-P	
Q123	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q124	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q125	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q151	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q152	8-729-802-80	TRANSISTOR 2SC3661	
Q153	8-729-802-80	TRANSISTOR 2SC3661	
Q154	8-729-802-80	TRANSISTOR 2SC3661	
Q155	8-729-802-80	TRANSISTOR 2SC3661	
Q166	8-729-802-80	TRANSISTOR 2SC3661	
Q175	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q402	8-729-027-43	TRANSISTOR DTC114EKA-T146 (E2, E3, E51)	
Q501	6-550-185-01	TRANSISTOR RT1P137P-TP-1	
Q502	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q505	8-729-113-69	TRANSISTOR FN1F4M-M32	
Q506	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q507	8-729-113-69	TRANSISTOR FN1F4M-M32	
Q508	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q509	8-729-113-69	TRANSISTOR FN1F4M-M32	
Q510	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q514	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q515	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q520	8-729-802-80	TRANSISTOR 2SC3661	
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q524	8-729-026-68	TRANSISTOR 2SD2525 (TP)	

Ref. No.	Part No.	Description			Remarks
Q526	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q527	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q570	8-729-802-80	TRANSISTOR 2SC3661			
		< RESISTOR >			
R101	1-216-812-11	METAL CHIP	180	5%	1/10W
R102	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R103	1-216-833-11	METAL CHIP	10K	5%	1/10W
R104	1-216-833-11	METAL CHIP	10K	5%	1/10W
R105	1-216-841-11	METAL CHIP	47K	5%	1/10W
R106	1-216-837-11	METAL CHIP	22K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R109	1-216-821-11	METAL CHIP	1K	5%	1/10W
R110	1-216-851-11	METAL CHIP	330K	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-833-11	METAL CHIP	10K	5%	1/10W
R113	1-216-833-11	METAL CHIP	10K	5%	1/10W
R114	1-216-864-11	SHORT CHIP	0		
R115	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R116	1-216-833-11	METAL CHIP	10K	5%	1/10W
R117	1-216-821-11	METAL CHIP	1K	5%	1/10W
R118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R119	1-216-816-11	METAL CHIP	390	5%	1/10W
R122	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R123	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R124	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R125	1-216-838-11	METAL CHIP	27K	5%	1/10W
R126	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R127	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R128	1-216-821-11	METAL CHIP	1K	5%	1/10W
R129	1-216-838-11	METAL CHIP	27K	5%	1/10W
R130	1-216-835-11	METAL CHIP	15K	5%	1/10W
R131	1-216-835-11	METAL CHIP	15K	5%	1/10W
R132	1-216-857-11	METAL CHIP	1M	5%	1/10W
R133	1-216-845-11	METAL CHIP	100K	5%	1/10W
R134	1-216-864-11	SHORT CHIP	0		
R135	1-216-833-11	METAL CHIP	10K	5%	1/10W
R136	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R137	1-216-837-11	METAL CHIP	22K	5%	1/10W
R138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R139	1-216-833-11	METAL CHIP	10K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-833-11	METAL CHIP	10K	5%	1/10W
R143	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R144	1-216-805-11	METAL CHIP	47	5%	1/10W
R145	1-216-833-11	METAL CHIP	10K	5%	1/10W
R146	1-216-797-11	METAL CHIP	10	5%	1/10W
R147	1-216-803-11	METAL CHIP	33	5%	1/10W
R148	1-216-841-11	METAL CHIP	47K	5%	1/10W
R149	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R150	1-216-841-11	METAL CHIP	47K	5%	1/10W
R151	1-216-812-11	METAL CHIP	180	5%	1/10W
R152	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W
R154	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R155	1-216-841-11	METAL CHIP	47K	5%	1/10W
R156	1-216-837-11	METAL CHIP	22K	5%	1/10W
R157	1-216-833-11	METAL CHIP	10K	5%	1/10W
R158	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R159	1-216-821-11	METAL CHIP	1K	5%	1/10W
R160	1-216-851-11	METAL CHIP	330K	5%	1/10W
R161	1-216-821-11	METAL CHIP	1K	5%	1/10W
R162	1-216-833-11	METAL CHIP	10K	5%	1/10W
R163	1-216-833-11	METAL CHIP	10K	5%	1/10W
R164	1-216-864-11	SHORT CHIP	0		
R165	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R166	1-216-833-11	METAL CHIP	10K	5%	1/10W
R167	1-216-821-11	METAL CHIP	1K	5%	1/10W
R168	1-216-833-11	METAL CHIP	10K	5%	1/10W
R169	1-216-816-11	METAL CHIP	390	5%	1/10W
R172	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R173	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R174	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R175	1-216-838-11	METAL CHIP	27K	5%	1/10W
R176	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R177	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R178	1-216-819-11	METAL CHIP	680	5%	1/10W
R179	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R180	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R181	1-216-819-11	METAL CHIP	680	5%	1/10W
R182	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R183	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R184	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R185	1-216-819-11	METAL CHIP	680	5%	1/10W
R186	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R187	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R188	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R189	1-216-809-11	METAL CHIP	100	5%	1/10W
R190	1-216-833-11	METAL CHIP	10K	5%	1/10W
R191	1-216-817-11	METAL CHIP	470	5%	1/10W
R192	1-216-817-11	METAL CHIP	470	5%	1/10W
R193	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R194	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R195	1-216-857-11	METAL CHIP	1M	5%	1/10W
R200	1-216-841-11	METAL CHIP	47K	5%	1/10W
R301	1-216-813-11	METAL CHIP	220	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-837-11	METAL CHIP	22K	5%	1/10W
R304	1-216-837-11	METAL CHIP	22K	5%	1/10W
R329	1-216-833-11	METAL CHIP	10K	5%	1/10W
R330	1-216-833-11	METAL CHIP	10K	5%	1/10W
R333	1-216-833-11	METAL CHIP	10K	5%	1/10W
R342	1-216-833-11	METAL CHIP	10K	5%	1/10W
R351	1-216-833-11	METAL CHIP	10K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W
R355	1-216-833-11	METAL CHIP	10K	5%	1/10W
R356	1-216-833-11	METAL CHIP	10K	5%	1/10W
R358	1-216-833-11	METAL CHIP	10K	5%	1/10W
R361	1-216-833-11	METAL CHIP	10K	5%	1/10W
R369	1-216-833-11	METAL CHIP	10K	5%	1/10W (E2, E3, E51)
R373	1-216-833-11	METAL CHIP	10K	5%	1/10W
R374	1-216-833-11	METAL CHIP	10K	5%	1/10W

HCD-GN880

MAIN

Ref. No.	Part No.	Description			Remarks
R375	1-216-833-11	METAL CHIP	10K	5%	1/10W
R381	1-216-833-11	METAL CHIP	10K	5%	1/10W
R386	1-216-833-11	METAL CHIP	10K	5%	1/10W
R387	1-216-833-11	METAL CHIP	10K	5%	1/10W
R389	1-216-833-11	METAL CHIP	10K	5%	1/10W
R390	1-216-833-11	METAL CHIP	10K	5%	1/10W
R391	1-216-833-11	METAL CHIP	10K	5%	1/10W
R392	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R393	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(E2, E51, MX)
R393	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(E3, AUS)
R394	1-216-821-11	METAL CHIP	1K	5%	1/10W
R395	1-216-833-11	METAL CHIP	10K	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-813-11	METAL CHIP	220	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-864-11	SHORT CHIP	0		
R406	1-216-864-11	SHORT CHIP	0		
R407	1-216-864-11	SHORT CHIP	0		
R409	1-216-833-11	METAL CHIP	10K	5%	1/10W
R411	1-216-851-11	METAL CHIP	330K	5%	1/10W
R412	1-216-845-11	METAL CHIP	100K	5%	1/10W
R413	1-216-864-11	SHORT CHIP	0		
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R418	1-216-813-11	METAL CHIP	220	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
R420	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R422	1-216-864-11	SHORT CHIP	0		
R423	1-216-864-11	SHORT CHIP	0		
R424	1-216-864-11	SHORT CHIP	0		
R426	1-216-864-11	SHORT CHIP	0		
R428	1-216-809-11	METAL CHIP	100	5%	1/10W
R429	1-216-809-11	METAL CHIP	100	5%	1/10W
R430	1-216-809-11	METAL CHIP	100	5%	1/10W
R433	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-809-11	METAL CHIP	100	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-809-11	METAL CHIP	100	5%	1/10W
R438	1-216-809-11	METAL CHIP	100	5%	1/10W
R442	1-216-809-11	METAL CHIP	100	5%	1/10W
R443	1-216-809-11	METAL CHIP	100	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W
R445	1-216-809-11	METAL CHIP	100	5%	1/10W
R446	1-216-809-11	METAL CHIP	100	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W
R448	1-216-809-11	METAL CHIP	100	5%	1/10W
R449	1-216-809-11	METAL CHIP	100	5%	1/10W
R450	1-216-809-11	METAL CHIP	100	5%	1/10W
R451	1-216-809-11	METAL CHIP	100	5%	1/10W
R452	1-216-809-11	METAL CHIP	100	5%	1/10W
R453	1-216-809-11	METAL CHIP	100	5%	1/10W
R455	1-216-809-11	METAL CHIP	100	5%	1/10W
R456	1-216-809-11	METAL CHIP	100	5%	1/10W
R458	1-216-809-11	METAL CHIP	100	5%	1/10W
R465	1-216-809-11	METAL CHIP	100	5%	1/10W
R466	1-216-809-11	METAL CHIP	100	5%	1/10W
R467	1-216-809-11	METAL CHIP	100	5%	1/10W
R468	1-216-809-11	METAL CHIP	100	5%	1/10W
R469	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
					(E2, E3, E51)
R481	1-216-809-11	METAL CHIP	100	5%	1/10W
R482	1-216-809-11	METAL CHIP	100	5%	1/10W
R483	1-216-809-11	METAL CHIP	100	5%	1/10W
R484	1-216-809-11	METAL CHIP	100	5%	1/10W
R485	1-216-809-11	METAL CHIP	100	5%	1/10W
R486	1-216-809-11	METAL CHIP	100	5%	1/10W
R487	1-216-809-11	METAL CHIP	100	5%	1/10W
R488	1-216-809-11	METAL CHIP	100	5%	1/10W
R489	1-216-809-11	METAL CHIP	100	5%	1/10W
R490	1-216-809-11	METAL CHIP	100	5%	1/10W
R491	1-216-809-11	METAL CHIP	100	5%	1/10W
R492	1-216-819-11	METAL CHIP	680	5%	1/10W
R493	1-216-815-11	METAL CHIP	330	5%	1/10W
					(E3)
R493	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
					(AUS)
R493	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
					(E2, E51, MX)
R494	1-216-809-11	METAL CHIP	100	5%	1/10W
R495	1-216-821-11	METAL CHIP	1K	5%	1/10W
R502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R508	1-216-853-11	METAL CHIP	470K	5%	1/10W
R509	1-216-843-11	METAL CHIP	68K	5%	1/10W
R510	1-216-835-11	METAL CHIP	15K	5%	1/10W
R511	1-216-853-11	METAL CHIP	470K	5%	1/10W
R512	1-216-843-11	METAL CHIP	68K	5%	1/10W
R513	1-216-835-11	METAL CHIP	15K	5%	1/10W
R514	1-216-853-11	METAL CHIP	470K	5%	1/10W
R515	1-216-843-11	METAL CHIP	68K	5%	1/10W
R516	1-216-835-11	METAL CHIP	15K	5%	1/10W
R520	1-216-821-11	METAL CHIP	1K	5%	1/10W
R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R522	1-216-841-11	METAL CHIP	47K	5%	1/10W
R523	1-216-833-11	METAL CHIP	10K	5%	1/10W
R524	1-216-821-11	METAL CHIP	1K	5%	1/10W
R525	1-216-845-11	METAL CHIP	100K	5%	1/10W
R528	1-216-821-11	METAL CHIP	1K	5%	1/10W
R529	1-216-839-11	METAL CHIP	33K	5%	1/10W
R530	1-216-864-11	SHORT CHIP	0		
R535	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R537	1-216-845-11	METAL CHIP	100K	5%	1/10W
R538	1-216-837-11	METAL CHIP	22K	5%	1/10W
R539	1-216-837-11	METAL CHIP	22K	5%	1/10W
R546	1-216-833-11	METAL CHIP	10K	5%	1/10W
R547	1-216-842-11	METAL CHIP	56K	5%	1/10W
R548	1-216-833-11	METAL CHIP	10K	5%	1/10W
R549	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R550	1-216-864-11	SHORT CHIP	0		
R551	1-216-864-11	SHORT CHIP	0		
R569	1-216-833-11	METAL CHIP	10K	5%	1/10W
					(MX, AUS)
R570	1-216-821-11	METAL CHIP	1K	5%	1/10W
R571	1-216-833-11	METAL CHIP	10K	5%	1/10W
R572	1-216-841-11	METAL CHIP	47K	5%	1/10W

MAIN | **MOTOR (LD)** | **MOTOR (TB)** | **PA**

Ref. No.	Part No.	Description			Remarks
R573	1-216-833-11	METAL CHIP	10K	5%	1/10W
R574	1-216-821-11	METAL CHIP	1K	5%	1/10W
R575	1-216-845-11	METAL CHIP	100K	5%	1/10W
R578	1-216-821-11	METAL CHIP	1K	5%	1/10W
R579	1-216-839-11	METAL CHIP	33K	5%	1/10W
R580	1-216-864-11	SHORT CHIP	0		
R584	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R585	1-216-833-11	METAL CHIP	10K	5%	1/10W
R586	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R587	1-216-833-11	METAL CHIP	10K	5%	1/10W
R588	1-216-837-11	METAL CHIP	22K	5%	1/10W
R589	1-216-845-11	METAL CHIP	100K	5%	1/10W
R590	1-216-833-11	METAL CHIP	10K	5%	1/10W
R591	1-216-833-11	METAL CHIP	10K	5%	1/10W
R592	1-216-845-11	METAL CHIP	100K	5%	1/10W
R593	1-216-845-11	METAL CHIP	100K	5%	1/10W
R594	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< TRANSFORMER >			
T101	1-433-372-11	TRANSFORMER, BIAS OSCILLATION			
		< VIBRATOR >			
X401	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X402	1-781-107-21	VIBRATOR, CERAMIC (16MHz)			
**********					
	1-687-133-12	MOTOR (LD) BOARD			
		**********			
**********					
	1-687-134-12	MOTOR (TB) BOARD			
		**********			
		< CONNECTOR >			
CN742	1-784-727-11	CONNECTOR, FFC 5P			
**********					
	A-1055-329-A	PA BOARD, COMPLETE (E3)			
	A-4751-012-A	PA BOARD, COMPLETE (E2, E51, MX)			
	A-4753-161-A	PA BOARD, COMPLETE (AUS)			
		**********			
	1-533-217-41	HOLDER, FUSE			
		< CAPACITOR >			
C600	1-126-963-11	ELECT	4.7uF	20%	50V
C601	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C602	1-104-658-91	ELECT	100uF	20%	10V
C604	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C608	1-126-965-91	ELECT	22uF	20%	50V
C609	1-128-560-11	ELECT	22uF	20%	100V
C610	1-128-560-11	ELECT	22uF	20%	100V
C616	1-136-495-11	FILM	0.068uF	5%	50V
C617	1-136-495-11	FILM	0.068uF	5%	50V
C618	1-128-582-11	ELECT	10uF	20%	100V
C619	1-128-582-11	ELECT	10uF	20%	100V
C634	1-104-665-11	ELECT	100uF	20%	25V

Ref. No.	Part No.	Description			Remarks
C635	1-104-665-11	ELECT	100uF	20%	25V
C636	1-107-721-11	ELECT	4.7uF	20%	100V
C637	1-107-721-11	ELECT	4.7uF	20%	100V
C648	1-104-658-91	ELECT	100uF	20%	10V
C649	1-126-964-11	ELECT	10uF	20%	50V
C650	1-126-963-11	ELECT	4.7uF	20%	50V
C651	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C652	1-104-658-91	ELECT	100uF	20%	10V
C654	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C655	1-126-964-11	ELECT	10uF	20%	50V
C656	1-127-815-11	ELECT	3300uF	20%	100V
C657	1-130-777-00	MYLAR	0.1uF	5%	100V
C658	1-127-812-11	ELECT	3300uF	20%	63V
C659	1-136-497-81	FILM	0.1uF	5%	50V
C660	1-131-992-91	CERAMIC CHIP	100000PF		35V
C662	1-126-964-11	ELECT	10uF	20%	50V
C663	1-126-968-11	ELECT	100uF	20%	50V
C666	1-136-495-11	FILM	0.068uF	5%	50V
C667	1-136-495-11	FILM	0.068uF	5%	50V
C676	1-127-815-11	ELECT	3300uF	20%	100V
C677	1-130-777-00	MYLAR	0.1uF	5%	100V
C678	1-127-812-11	ELECT	3300uF	20%	63V
C679	1-136-497-81	FILM	0.1uF	5%	50V
C683	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C684	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C693	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C694	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C698	1-128-576-11	ELECT	100uF	20%	63V
		< CONNECTOR >			
CN600	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P			
CN601	1-573-825-11	CONNECTOR, BOARD TO BOARD 11P			
* CN602	1-564-508-11	PLUG, CONNECTOR 5P			
* CN604	1-564-243-11	PIN, CONNECTOR (3.96mm PITCH) 6P			
		< DIODE >			
D609	8-719-988-61	DIODE 1SS355TE-17			
D611	8-719-083-66	DIODE UDZSTE-1718B			
D612	8-719-083-66	DIODE UDZSTE-1718B			
D620	8-719-988-61	DIODE 1SS355TE-17			
D624	8-719-988-61	DIODE 1SS355TE-17			
D646	8-719-988-61	DIODE 1SS355TE-17			
D654	8-719-988-61	DIODE 1SS355TE-17			
D655	8-719-988-61	DIODE 1SS355TE-17			
D656	8-719-066-42	DIODE RBV1306			
D658	8-719-073-31	DIODE D25XB60F01			
D660	8-719-988-61	DIODE 1SS355TE-17			
D661	8-719-988-61	DIODE 1SS355TE-17			
D664	8-719-083-87	DIODE UDZSTE-1733B			
D665	8-719-988-61	DIODE 1SS355TE-17			
D670	8-719-988-61	DIODE 1SS355TE-17			
D699	6-500-522-21	DIODE 10EDB40-TB3			
		< EARTH TERMINAL >			
EP660	1-537-738-21	TERMINAL, GROUND			
EP690	1-537-738-21	TERMINAL, GROUND			

PA

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC600	8-749-017-06	IC STK412-150			
		< SHORT >			
JR600	1-216-296-11	SHORT CHIP	0		
JR601	1-216-296-11	SHORT CHIP	0		
JR602	1-216-296-11	SHORT CHIP	0		
JR603	1-216-296-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q604	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q606	8-729-821-00	TRANSISTOR	2SA1207		
Q610	8-729-924-99	TRANSISTOR	2SC3722K-E		
Q618	8-729-924-99	TRANSISTOR	2SC3722K-E		
Q628	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q629	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q630	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q634	8-729-113-69	TRANSISTOR	FN1F4M-M32		
Q640	8-729-802-80	TRANSISTOR	2SC3661		
Q641	8-729-802-80	TRANSISTOR	2SC3661		
Q644	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q647	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q648	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q664	8-729-024-93	TRANSISTOR	2SB1565E		
Q666	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
Q668	8-729-924-99	TRANSISTOR	2SC3722K-E		
Q682	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
		< RESISTOR >			
R600	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R601	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R602	1-216-816-11	METAL CHIP	390	5% 1/10W	(E3, AUS)
R602	1-216-818-11	METAL CHIP	560	5% 1/10W	(E2, E51, MX)
R603	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R604	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R605	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R606	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R607	1-216-825-11	METAL CHIP	2.2K	5% 1/10W	
R608	1-216-843-11	METAL CHIP	68K	5% 1/10W	
R609	1-216-843-11	METAL CHIP	68K	5% 1/10W	
R610	1-216-843-11	METAL CHIP	68K	5% 1/10W	
R611	1-216-839-11	METAL CHIP	33K	5% 1/10W	
⚠R612	1-245-605-51	FUSIBLE	100	5% 1/4W	
R613	1-215-872-11	METAL OXIDE	3.3K	5% 1W	
R614	1-215-872-11	METAL OXIDE	3.3K	5% 1W	
⚠R615	1-245-605-51	FUSIBLE	100	5% 1/4W	
⚠R616	1-217-637-00	FUSIBLE	1	5% 1/4W	
R617	1-216-845-11	METAL CHIP	100K	5% 1/10W	
⚠R618	1-234-798-11	ENCAPSULATED COMPONENT			
R619	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R620	1-216-839-11	METAL CHIP	33K	5% 1/10W	
R621	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R622	1-249-625-31	CARBON	10	5% 1/2W	
R623	1-216-843-11	METAL CHIP	68K	5% 1/10W	
R624	1-216-837-11	METAL CHIP	22K	5% 1/10W	

Ref. No.	Part No.	Description			Remarks
R625	1-216-826-11	METAL CHIP	2.7K	5% 1/10W	
R628	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R629	1-216-822-11	METAL CHIP	1.2K	5% 1/10W	
R630	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R631	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R632	1-216-854-11	METAL CHIP	560K	5% 1/10W	
R633	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R634	1-216-825-11	METAL CHIP	2.2K	5% 1/10W	
R635	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R636	1-215-891-11	METAL OXIDE	680	5% 2W	
R637	1-215-891-11	METAL OXIDE	680	5% 2W	
R638	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R639	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R640	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R641	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R642	1-216-806-11	METAL CHIP	56	5% 1/10W	
R643	1-216-806-11	METAL CHIP	56	5% 1/10W	
R644	1-216-825-11	METAL CHIP	2.2K	5% 1/10W	
R645	1-216-833-11	METAL CHIP	10K	5% 1/10W	
⚠R646	1-215-863-11	METAL OXIDE	100	5% 1W	
R647	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R648	1-216-837-11	METAL CHIP	22K	5% 1/10W	
R649	1-216-837-11	METAL CHIP	22K	5% 1/10W	
R650	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R651	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R652	1-216-816-11	METAL CHIP	390	5% 1/10W	(E3, AUS)
R652	1-216-818-11	METAL CHIP	560	5% 1/10W	(E2, E51, MX)
R653	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R654	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R655	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R656	1-216-849-11	METAL CHIP	220K	5% 1/10W	
R657	1-216-849-11	METAL CHIP	220K	5% 1/10W	
R658	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R660	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R661	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R662	1-216-832-11	METAL CHIP	8.2K	5% 1/10W	
R663	1-216-832-11	METAL CHIP	8.2K	5% 1/10W	
R664	1-216-821-11	METAL CHIP	1K	5% 1/10W	
⚠R665	1-215-863-11	METAL OXIDE	100	5% 1W	
R666	1-216-829-11	METAL CHIP	4.7K	5% 1/10W	
R667	1-216-833-11	METAL CHIP	10K	5% 1/10W	
⚠R668	1-234-798-11	ENCAPSULATED COMPONENT			
R669	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R670	1-216-839-11	METAL CHIP	33K	5% 1/10W	
R671	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R672	1-249-625-31	CARBON	10	5% 1/2W	
R673	1-216-842-11	METAL CHIP	56K	5% 1/10W	
R674	1-216-837-11	METAL CHIP	22K	5% 1/10W	
R676	1-216-849-11	METAL CHIP	220K	5% 1/10W	
R677	1-216-849-11	METAL CHIP	220K	5% 1/10W	
R678	1-216-845-11	METAL CHIP	100K	5% 1/10W	
R682	1-216-821-11	METAL CHIP	1K	5% 1/10W	
R683	1-216-829-11	METAL CHIP	4.7K	5% 1/10W	
R692	1-216-841-11	METAL CHIP	47K	5% 1/10W	
R693	1-216-843-11	METAL CHIP	68K	5% 1/10W	
R694	1-216-843-11	METAL CHIP	68K	5% 1/10W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R695	1-216-845-11	METAL CHIP	100K	5%	1/10W
R696	1-216-845-11	METAL CHIP	100K	5%	1/10W
R697	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
⚠R699	1-219-124-11	FUSIBLE	0.68	5%	1/4W
		< RELAY >			
RY646	1-755-372-11	RELAY			
RY665	1-755-372-11	RELAY			
		< THERMISTOR >			
TH629	1-807-796-11	THERMISTOR			
TH630	1-807-796-11	THERMISTOR			
		< TERMINAL >			
TM601	1-816-048-11	TERMINAL BOARD (FRONT/SURROUND SPEAKER R)			
TM602	1-816-048-11	TERMINAL BOARD (FRONT/SURROUND SPEAKER L)			
**********					
	A-1056-930-A	PANEL BOARD, COMPLETE (MX)			
	A-4750-973-A	PANEL BOARD, COMPLETE (E2, E3, E51, AUS)			
		**********			
	4-231-581-01	HOLDER (FL)			
		< CAPACITOR >			
C900	1-126-163-11	ELECT	4.7uF	20%	50V
C901	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C902	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C903	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C904	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C905	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C906	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C907	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C908	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C909	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C910	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C911	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C912	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C913	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C914	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C916	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C918	1-119-941-91	ELECT	470uF	20%	6.3V
C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-124-589-11	ELECT	47uF	20%	16V
C922	1-124-261-00	ELECT	10uF	20%	50V
C923	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C924	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C925	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C926	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C927	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C928	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C929	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C930	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C931	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C932	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C933	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C934	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C935	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C936	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C937	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C938	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C939	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C940	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C941	1-124-261-00	ELECT	10uF	20%	50V
C942	1-124-261-00	ELECT	10uF	20%	50V
C944	1-124-261-00	ELECT	10uF	20%	50V
C945	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C946	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C947	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C948	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C949	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C950	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C951	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C952	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C953	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C954	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C955	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C956	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C957	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C958	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C959	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C960	1-124-261-00	ELECT	10uF	20%	50V
C961	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C963	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C966	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C967	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C968	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C969	1-126-968-11	ELECT	100uF	20%	50V
C971	1-119-941-91	ELECT	470uF	20%	6.3V
C972	1-119-941-91	ELECT	470uF	20%	6.3V
C980	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C981	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C982	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C983	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C984	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C985	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
* CN902	1-568-862-11	SOCKET, CONNECTOR 19P			
CN907	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P			
CNS901	1-770-401-11	HOUSING, CONNECTOR (PC BOARD) 8P			
		< DIODE >			
D903	6-500-508-01	DIODE RR263M-400FTR			
D904	6-500-508-01	DIODE RR263M-400FTR			
D905	8-719-069-54	DIODE UDZSTE-175.1B			
D906	8-719-057-97	DIODE SEL5923A-TP15 (CD)			
D907	8-719-057-97	DIODE SEL5923A-TP15 (TUNER/BAND)			
D908	8-719-057-97	DIODE SEL5923A-TP15 (TAPE A/B)			
D909	8-719-057-97	DIODE SEL5923A-TP15 (VIDEO/MD)			
D910	8-719-057-97	DIODE SEL5923A-TP15 (GAME)			
D911	8-719-063-93	DIODE SLR325VC-N-T32 (REC PAUSE/START)			

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PANEL

Ref. No.	Part No.	Description			Remarks
D914	6-500-529-01	DIODE SLI-325URT31W (VOL 11)			
D915	6-500-529-01	DIODE SLI-325URT31W (VOL 10)			
D916	6-500-529-01	DIODE SLI-325URT31W (VOL 9)			
D917	6-500-529-01	DIODE SLI-325URT31W (VOL 8)			
D918	6-500-529-01	DIODE SLI-325URT31W (VOL 7)			
D919	6-500-529-01	DIODE SLI-325URT31W (VOL 6)			
D920	6-500-529-01	DIODE SLI-325URT31W (VOL 5)			
D921	6-500-529-01	DIODE SLI-325URT31W (VOL 4)			
D922	6-500-529-01	DIODE SLI-325URT31W (VOL 3)			
D923	6-500-529-01	DIODE SLI-325URT31W (VOL 2)			
D924	6-500-529-01	DIODE SLI-325URT31W (VOL 1)			
		< FERRITE BEAD >			
FB901	1-216-864-11	SHORT CHIP	0		
		< FILTER >			
FL901	1-518-981-11	VACUUM FLUORESCENT DISPLAYS			
		< IC >			
IC901	6-803-971-01	IC MB90M407PF-G-139-BNDE1			
IC902	6-600-174-01	IC RPM7240-H4			
IC903	6-705-678-01	IC NJM2760V-TE2			
		< SHORT >			
JR901	1-216-864-11	SHORT CHIP	0		
JR904	1-216-864-11	SHORT CHIP	0		
JR905	1-216-864-11	SHORT CHIP	0		
JR906	1-216-864-11	SHORT CHIP	0		
JR907	1-216-864-11	SHORT CHIP	0		
JR908	1-216-864-11	SHORT CHIP	0		
JR910	1-216-864-11	SHORT CHIP	0		
JR911	1-216-864-11	SHORT CHIP	0		
JR913	1-216-864-11	SHORT CHIP	0		
JR914	1-216-864-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q901	8-729-027-56	TRANSISTOR DTC143TKA-T146			
Q904	8-729-106-60	TRANSISTOR 2SB1115A-YQ			
Q905	8-729-106-60	TRANSISTOR 2SB1115A-YQ			
Q906	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q907	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q908	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q909	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q910	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q911	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q912	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q913	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q914	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q915	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q916	8-729-027-43	TRANSISTOR DTC114EKA-T146			
		< RESISTOR >			
R831	1-216-817-11	METAL CHIP	470	5%	1/10W
R832	1-216-819-11	METAL CHIP	680	5%	1/10W
R833	1-216-821-11	METAL CHIP	1K	5%	1/10W
R834	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R835	1-216-814-11	METAL CHIP	270	5%	1/10W
R836	1-216-817-11	METAL CHIP	470	5%	1/10W
R837	1-216-819-11	METAL CHIP	680	5%	1/10W
R838	1-216-821-11	METAL CHIP	1K	5%	1/10W
R839	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R840	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R841	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R842	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R843	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R844	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R845	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R846	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R900	1-216-833-11	METAL CHIP	10K	5%	1/10W
R901	1-216-833-11	METAL CHIP	10K	5%	1/10W
R902	1-216-833-11	METAL CHIP	10K	5%	1/10W
R903	1-216-809-11	METAL CHIP	100	5%	1/10W
R904	1-216-809-11	METAL CHIP	100	5%	1/10W
R905	1-216-835-11	METAL CHIP	15K	5%	1/10W
R906	1-216-835-11	METAL CHIP	15K	5%	1/10W
R907	1-216-835-11	METAL CHIP	15K	5%	1/10W
R908	1-216-821-11	METAL CHIP	1K	5%	1/10W
R909	1-216-833-11	METAL CHIP	10K	5%	1/10W
R910	1-216-821-11	METAL CHIP	1K	5%	1/10W
R911	1-216-833-11	METAL CHIP	10K	5%	1/10W
R912	1-216-809-11	METAL CHIP	100	5%	1/10W
R914	1-216-833-11	METAL CHIP	10K	5%	1/10W
R915	1-216-821-11	METAL CHIP	1K	5%	1/10W
R916	1-216-821-11	METAL CHIP	1K	5%	1/10W
R917	1-216-833-11	METAL CHIP	10K	5%	1/10W
R918	1-216-845-11	METAL CHIP	100K	5%	1/10W
R920	1-216-833-11	METAL CHIP	10K	5%	1/10W
R922	1-216-857-11	METAL CHIP	1M	5%	1/10W
R924	1-216-821-11	METAL CHIP	1K	5%	1/10W (MX)
R924	1-216-864-11	SHORT CHIP	0 (E2, E3, E51, AUS)		
R939	1-216-821-11	METAL CHIP	1K	5%	1/10W
R940	1-216-833-11	METAL CHIP	10K	5%	1/10W
R941	1-216-809-11	METAL CHIP	100	5%	1/10W
R942	1-216-809-11	METAL CHIP	100	5%	1/10W
R943	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R944	1-216-805-11	METAL CHIP	47	5%	1/10W
R945	1-216-841-11	METAL CHIP	47K	5%	1/10W
R946	1-216-844-11	METAL CHIP	82K	5%	1/10W
R947	1-216-821-11	METAL CHIP	1K	5%	1/10W
R948	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R949	1-216-821-11	METAL CHIP	1K	5%	1/10W
R950	1-216-821-11	METAL CHIP	1K	5%	1/10W
R951	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R952	1-216-821-11	METAL CHIP	1K	5%	1/10W
R953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R954	1-216-833-11	METAL CHIP	10K	5%	1/10W
R956	1-216-833-11	METAL CHIP	10K	5%	1/10W
R957	1-216-845-11	METAL CHIP	100K	5%	1/10W
R958	1-216-817-11	METAL CHIP	470	5%	1/10W
R959	1-216-819-11	METAL CHIP	680	5%	1/10W
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R962	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R963	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R964	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R965	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R966	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R975	1-216-817-11	METAL CHIP	470	5%	1/10W
R977	1-216-821-11	METAL CHIP	1K	5%	1/10W
R978	1-216-817-11	METAL CHIP	470	5%	1/10W
R980	1-216-821-11	METAL CHIP	1K	5%	1/10W
R981	1-216-821-11	METAL CHIP	1K	5%	1/10W
R982	1-216-821-11	METAL CHIP	1K	5%	1/10W
R983	1-216-821-11	METAL CHIP	1K	5%	1/10W
R987	1-216-821-11	METAL CHIP	1K	5%	1/10W
R988	1-216-821-11	METAL CHIP	1K	5%	1/10W
R989	1-216-821-11	METAL CHIP	1K	5%	1/10W
R993	1-216-821-11	METAL CHIP	1K	5%	1/10W
R994	1-216-821-11	METAL CHIP	1K	5%	1/10W
R995	1-216-821-11	METAL CHIP	1K	5%	1/10W
R999	1-216-864-11	SHORT CHIP	0		
R1303	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1304	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1305	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1306	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1307	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1308	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1312	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1313	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1314	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1318	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1319	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1320	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1324	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1326	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1330	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1331	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1332	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
		< SWITCH >			
S900	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S901	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE, TUNING MODE)			
S902	1-762-875-21	SWITCH, KEYBOARD (REPEAT,FM MODE)			
S903	1-762-875-21	SWITCH, KEYBOARD (DIRECTION, TUNER MEMORY)			
S904	1-762-875-21	SWITCH, KEYBOARD (◄ ►)			
S905	1-762-875-21	SWITCH, KEYBOARD (SURR SPEAKER MODE)			
S906	1-762-875-21	SWITCH, KEYBOARD (EFFECT ON/OFF)			
S907	1-762-875-21	SWITCH, KEYBOARD (GROOVE)			
S908	1-762-875-21	SWITCH, KEYBOARD (ILLUMINATION)			
S909	1-762-875-21	SWITCH, KEYBOARD (ENTER)			
S910	1-762-875-21	SWITCH, KEYBOARD (EQ EDIT)			
S911	1-762-875-21	SWITCH, KEYBOARD (P FILE MEMORY)			
S912	1-762-875-21	SWITCH, KEYBOARD (▮▮)			
S913	1-762-875-21	SWITCH, KEYBOARD (■)			
S914	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)			
S915	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S924	1-762-875-21	SWITCH, KEYBOARD (SLEEP)			
S925	1-762-875-21	SWITCH, KEYBOARD (AMP MENU)			
S927	1-762-875-21	SWITCH, KEYBOARD (GAME MIXING)			
S928	1-762-875-21	SWITCH, KEYBOARD (GAME)			
S929	1-762-875-21	SWITCH, KEYBOARD (VIDEO/MD)			
S930	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)			
S931	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)			
S932	1-762-875-21	SWITCH, KEYBOARD (CD)			
S970	1-418-725-51	ENCODER, ROTARY (12 TYPE) (VOLUME)			
		< VIBRATOR >			
X901	1-781-282-51	VIBRATOR, CERAMIC (4MHz)			
		**********			
	A-4750-964-A	PRIMARY BOARD, COMPLETE (E2, E3, E51)			
	A-4753-137-A	PRIMARY BOARD, COMPLETE (MX)			
	A-4753-146-A	PRIMARY BOARD, COMPLETE (AUS)			
		**********			
		< CAPACITOR >			
⚠C1000	1-113-925-11	CERAMIC	0.01uF	20%	250V
C1001	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1002	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1003	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1005	1-126-916-11	ELECT	1000uF	20%	6.3V
		< CONNECTOR >			
CN1000	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
* CN1001	1-566-664-11	PIN, CONNECTOR (3.96mm PITCH) 4P (E2, E3, E51, AUS)			
* CN1001	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P (MX)			
CN1002	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P			
		< DIODE >			
D1000	8-719-988-61	DIODE 1SS355TE-17			
		< COIL >			
L1001	1-410-666-31	INDUCTOR	18uH		
		< TRANSISTOR >			
Q1000	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
		< RESISTOR >			
R1000	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1001	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1003	1-216-864-11	SHORT CHIP	0		
		< RELAY >			
⚠RY1000	1-755-299-11	RELAY			
		< SWITCH >			
⚠S1000	1-771-291-31	SWITCH, POWER (VOLTAGE SELECTOR) (E2, E3, E51)			
		**********			
	1-687-132-12	SENSOR BOARD			
		**********			
		< CONNECTOR >			
CN731	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SENSOR SURROUND

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC731	6-600-022-01	IC RPI-576			
**********					
	A-1053-567-A	SURROUND BOARD, COMPLETE (MX)			
	A-4751-013-A	SURROUND BOARD, COMPLETE (E2, E3, E51)			
	A-4753-163-A	SURROUND BOARD, COMPLETE (AUS)			
		**********			
	1-533-217-41	HOLDER, FUSE			
		< CAPACITOR >			
C700	1-126-963-11	ELECT	4.7uF	20%	50V
C701	1-100-717-91	CERAMIC CHIP	1uF		16V
C702	1-104-658-91	ELECT	100uF	20%	10V
C703	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C704	1-124-257-00	ELECT	2.2uF	20%	50V
C710	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C711	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C713	1-126-963-11	ELECT	4.7uF	20%	50V
C714	1-126-963-11	ELECT	4.7uF	20%	50V
C720	1-126-967-11	ELECT	47uF	20%	50V
C721	1-126-968-11	ELECT	100uF	20%	50V
C730	1-131-992-91	CERAMIC CHIP	100000PF		35V
C731	1-131-992-91	CERAMIC CHIP	100000PF		35V
C745	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C751	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C752	1-104-658-91	ELECT	100uF	20%	10V
C753	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C760	1-130-483-00	MYLAR	0.01uF	5%	50V
C761	1-130-483-00	MYLAR	0.01uF	5%	50V
C780	1-131-992-91	CERAMIC CHIP	100000PF		35V
C781	1-131-992-91	CERAMIC CHIP	100000PF		35V
C790	1-131-992-91	CERAMIC CHIP	100000PF		35V
C795	1-128-563-11	ELECT	100uF	20%	100V
C796	1-128-563-11	ELECT	100uF	20%	100V
C797	1-128-563-11	ELECT	100uF	20%	100V
C798	1-128-563-11	ELECT	100uF	20%	100V
		< CONNECTOR >			
* CN700	1-766-719-11	CONNECTOR, BOARD TO BOARD 10P			
CN701	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P			
* CN703	1-564-508-11	PLUG, CONNECTOR 5P			
		< DIODE >			
D701	8-719-988-61	DIODE 1SS355TE-17 (E2, E3, E51)			
D702	8-719-988-61	DIODE 1SS355TE-17			
D720	8-719-988-61	DIODE 1SS355TE-17			
D730	8-719-988-61	DIODE 1SS355TE-17			
D760	8-719-988-61	DIODE 1SS355TE-17			
D761	8-719-988-61	DIODE 1SS355TE-17			
D763	8-719-500-56	DIODE D3SBA20			
D780	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC700	8-749-017-16	IC STK442-130M			

Ref. No.	Part No.	Description			Remarks
		< JACK >			
J700	1-780-127-11	TERMINAL BOARD (SUBWOOFER OUT)			
		< TRANSISTOR >			
Q700	8-729-802-80	TRANSISTOR 2SC3661			
Q701	8-729-014-97	TRANSISTOR FA1L3Z-T1B (E2, E3, E51)			
Q720	8-729-924-99	TRANSISTOR 2SC3722K-E			
Q721	8-729-821-00	TRANSISTOR 2SA1207			
Q722	8-729-924-99	TRANSISTOR 2SC3722K-E			
Q730	8-729-924-99	TRANSISTOR 2SC3722K-E			
Q762	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
Q764	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
Q780	8-729-924-99	TRANSISTOR 2SC3722K-E			
		< RESISTOR >			
R700	1-216-821-11	METAL CHIP	1K	5%	1/10W
R701	1-216-841-11	METAL CHIP	47K	5%	1/10W
R702	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R703	1-216-864-11	SHORT CHIP	0		
R705	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R706	1-216-833-11	METAL CHIP	10K	5%	1/10W
R707	1-216-824-11	METAL CHIP	1.8K	5%	1/10W (E2, E3, E51)
R708	1-216-842-11	METAL CHIP	56K	5%	1/10W (E2, E3, E51)
R709	1-216-833-11	METAL CHIP	10K	5%	1/10W
R710	1-216-841-11	METAL CHIP	47K	5%	1/10W
R711	1-216-841-11	METAL CHIP	47K	5%	1/10W
R713	1-216-841-11	METAL CHIP	47K	5%	1/10W
R714	1-216-821-11	METAL CHIP	1K	5%	1/10W
R720	1-216-833-11	METAL CHIP	10K	5%	1/10W
R721	1-216-833-11	METAL CHIP	10K	5%	1/10W
R722	1-216-837-11	METAL CHIP	22K	5%	1/10W
R723	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R724	1-216-845-11	METAL CHIP	100K	5%	1/10W
R725	1-216-841-11	METAL CHIP	47K	5%	1/10W
R726	1-216-837-11	METAL CHIP	22K	5%	1/10W
R727	1-216-839-11	METAL CHIP	33K	5%	1/10W
⚠R730	1-234-499-21	ENCAPSULATED COMPONENT			
R731	1-216-821-11	METAL CHIP	1K	5%	1/10W
R732	1-216-835-11	METAL CHIP	15K	5%	1/10W
R733	1-216-845-11	METAL CHIP	100K	5%	1/10W
R734	1-216-841-11	METAL CHIP	47K	5%	1/10W
R735	1-249-625-31	CARBON	10	5%	1/2W
R751	1-216-841-11	METAL CHIP	47K	5%	1/10W
R752	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R765	1-215-863-11	METAL OXIDE	100	5%	1W
R766	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R767	1-216-837-11	METAL CHIP	22K	5%	1/10W
⚠R780	1-234-499-21	ENCAPSULATED COMPONENT			
R781	1-216-821-11	METAL CHIP	1K	5%	1/10W
R782	1-216-835-11	METAL CHIP	15K	5%	1/10W
R783	1-216-845-11	METAL CHIP	100K	5%	1/10W
R784	1-216-842-11	METAL CHIP	56K	5%	1/10W
R785	1-249-625-31	CARBON	10	5%	1/2W
R790	1-216-821-11	METAL CHIP	1K	5%	1/10W
R791	1-216-837-11	METAL CHIP	22K	5%	1/10W

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Ref. No.	Part No.	Description			Remarks
R792	1-218-292-11	METAL CHIP	20K	5%	1/10W
⚠R793	1-217-637-00	FUSIBLE	1	5%	1/4W
⚠R794	1-245-605-51	FUSIBLE	100	5%	1/4W
⚠R795	1-245-605-51	FUSIBLE	100	5%	1/4W
		< RELAY >			
RY760	1-755-372-11	RELAY			
**********					
	1-687-669-12	SW BOARD			
		********			
S751	1-786-514-11	SWITCH, LEVER (SLIDE) (LEVER SW)			
**********					
		SWITCH BOARD			
		**********			
		< CONNECTOR >			
CN903	1-779-978-11	PIN, CONNECTOR 3P			
		< RESISTOR >			
R847	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R848	1-216-833-11	METAL CHIP	10K	5%	1/10W
R849	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S916	1-478-547-11	ENCODER, ROTARY (I◀◀ ▶▶I)			
S917	1-771-963-11	SWITCH, ROTARY (◀◀ ▶▶ ,ALBUM)			
**********					
		MISCELLANEOUS			
		**********			
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (E51)			
⚠	1-569-007-11	ADAPTOR, CONVERSION 2P (E3)			
6	1-500-497-11	FILTER, CLAMP (FERRITE CORE)			
7	1-693-603-11	TUNER (FM/AM)			
⚠8	1-468-737-21	POWER, SWITCHING			
65	1-773-109-11	WIRE (FLAT TYPE) (19 CORE)			
71	1-796-487-51	DECK, MECHANICAL (E3, E51, MX, AUS)			
71	1-796-487-61	DECK, MECHANICAL (E2)			
⚠104	1-777-071-53	CORD, POWER (E51)			
⚠104	1-827-226-11	CORD, POWER (E2, E3, MX)			
⚠104	1-827-295-22	CORD, POWER (AUS)			
152	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)			
226	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)			
227	1-775-248-11	WIRE (FLAT TYPE) (27 CORE)			
⚠229	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)			
230	1-471-035-11	MAGNET ASSY			
⚠F696	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)			
⚠F697	1-576-655-12	FUSE, GLASS TUBE (DIA. 5) (T8.0AL/250V)			
⚠F698	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (6.3A/250V)			
⚠F699	1-533-473-12	FUSE, GLASS TUBE (DIA. 5) (6.3A/250V)			
⚠F760	1-533-470-12	FUSE, GLASS TUBE (DIA. 5) (T3.15AL/250V)			
FL901	1-518-981-11	VACUUM FLUORESCENT DISPLAY			
M741	A-4723-963-A	MOTOR ASSY, TABLE			
M751	A-4737-553-A	MOTOR ASSY, LOADING			
M891	1-787-099-21	FAN, DC			

Ref. No.	Part No.	Description	Remarks
RE701	1-477-680-12	ENCODER, ROTARY	
⚠T601	1-443-202-11	POWER TRANSFORMER (E2, E3, E51, AUS)	
⚠T601	1-443-202-21	POWER TRANSFORMER (MX)	

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Replace only with part number specified.